Drinking Water Surveillance Program

PETERBOROUGH WATER SUPPLY SYSTEM

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PETERBOROUGH WATER SUPPLY SYSTEM

DRINKING WATER SURVEILLANCE PROGRAM

ANNUAL REPORT 1988

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EXECUTIVE SUMMARY

DRINKING WATER SURVEILLANCE PROGRAM

PETERBOROUGH WATER SUPPLY SYSTEM
1988 ANNUAL REPORT

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. Currently, 52 plants are being monitored.

The Peterborough Water Treatment Plant is a conventional treatment plant which treats water from the Otonabee River. The treatment process consists of coagulation, flocculation, sedimentation, filtration, disinfection and fluoridation. This plant has a design capacity of 104 x 1000 m^3/day and serves a population of 61,500 people.

Water samples from the raw, treated and two distribution sites were taken on a monthly basis and analyzed for approximately 160 parameters. Parameters were divided into the following groups Bacteriological, Inorganic and Physical(Laboratory Chemistry, Field Chemistry and Metals) and Organics (Chloroaromatics, Chlorophenols, Pesticide and PCB, Phenolics, Polynuclear Aromatic Hydrocarbons, Specific Pesticides and Volatiles). Specific Pesticides and Chlorophenols were analysed for in June and November only.

A summary of results is shown in Table 1.

Inorganic and Physical parameters (Laboratory Chemistry, Field Chemistry and Metals) were below any applicable health related ODWOs.

Of approximately 110 Organic parameters tested for on a monthly basis, none exceeded health related guidelines.

During 1988 the DWSP sampling results indicated that the Peterborough Water Treatment Plant produced good quality water at the plant and this quality was maintained in the distribution system.

TABLE 1

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS

SUMMARY TABLE BY SCAN

SCAN	RAW			TREATED			SITE 1			SITE 2		
	TESTS	POSITIVE	%POSITIVE	TESTS	POSITIVE	%POSITIVE	TESTS	POSITIVE	%POSITIVE	TESTS	POSITIVE	%POSITIVE
BACTERIOLOGICAL	44	40	90	44	9	20	36	3	8	45	15	33
CHEMISTRY (FLD)	36	36	100	72	72	100	120	120	100	131	131	100
CHEMISTRY (LAB)	235	190	80	237	190	80	349	292	83	384	332	86
METALS	288	110	38	288	88	30	470	196	41	517	227	43
CHLOROAROMATICS	168	0	0	168	0	0	140	0	0	140	0	0
CHLOROPHENOLS	12	0	0	12	0	0	.	.	.	.	.	.
PAH	187	0	0	187	0	0	.	.	.	.	.	.
PESTICIDES & PCB	396	0	0	396	0	0	330	0	0	343	0	0
PHENOLICS	12	6	50	12	7	58	.	.	.	.	.	.
SPECIFIC PESTICIDES	56	0	0	56	0	0	0	0	0	0	0	0
VOLATILES	316	1	.3	314	36	11	257	30	11	285	34	11
TOTAL	1750	383		1786	402		1702	641		1845	739	

NO HEALTH RELATED GUIDELINES WERE EXCEEDED

A POSITIVE VALUE DENOTES THAT THE RESULT IS GREATER THAN THE STATISTICAL LIMIT OF DETECTION AND IS QUANTIFIABLE
A '.' INDICATES THAT NO SAMPLE WAS TAKEN

DRINKING WATER SURVEILLANCE PROGRAM

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INTRODUCTION

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. Currently, 52 plants are being monitored.

The DWSP was initiated at the Peterborough Water Treatment Plant in January 1987. An annual report was published for 1987 (ISSN 0840-514x). This report contains information and results for 1988.

PLANT DESCRIPTION

The Peterborough Water Treatment Plant is a conventional treatment plant which treats water from the Otonabee River. The process consists of coagulation, flocculation, sedimentation, filtration, disinfection and fluoridation. Sulphur Dioxide is used as a dechlorinator. This plant has a design capacity of 104 x 1000 m^3/day and flows on day of sampling ranging from 43.5 x 1000 m^3/day to 98.6 x 1000 m^3/day. It serves a population of 61,500.

The plant location is shown in Figure 1. Plant Process details, in a block

schematic, are shown in Figure 2. General plant information is presented in Table 2.

METHODS

Water samples were obtained from four DWSP approved locations;

i) Plant Raw - The water originated from the suction well prior to chlorination and was sampled through a copper line. The sample tap is located in the plant laboratory.

ii) Plant Treated - The water originated from the clearwell after addition of all treatment chemicals and was sampled through a copper line. The sample tap is located in the plant laboratory.

iii) Distribution System - Site 1 - This house is approximately 1.3 kilometers from the plant. Water was sampled through copper plumbing from the basement laundry tap.

iv) Distribution System - Site 2 - The distance of this house from the plant is unavailable. Water was sampled through copper plumbing from the kitchen tap.

Sample lines in the plant were flushed prior to sampling to ensure that the water obtained was indicative of its origin and not residual water standing in the sample line.

At both distribution system locations two types of samples were obtained: a standing and a free flow. The standing sample consisted of water that had

FIGURE 1

DRINKING WATER SURVEILLANCE PROGRAM

SITE LOCATION MAP

PETERBOROUGH WATER TREATMENT PLANT

FIGURE 2

PETERBOROUGH WATER TREATMENT PLANT

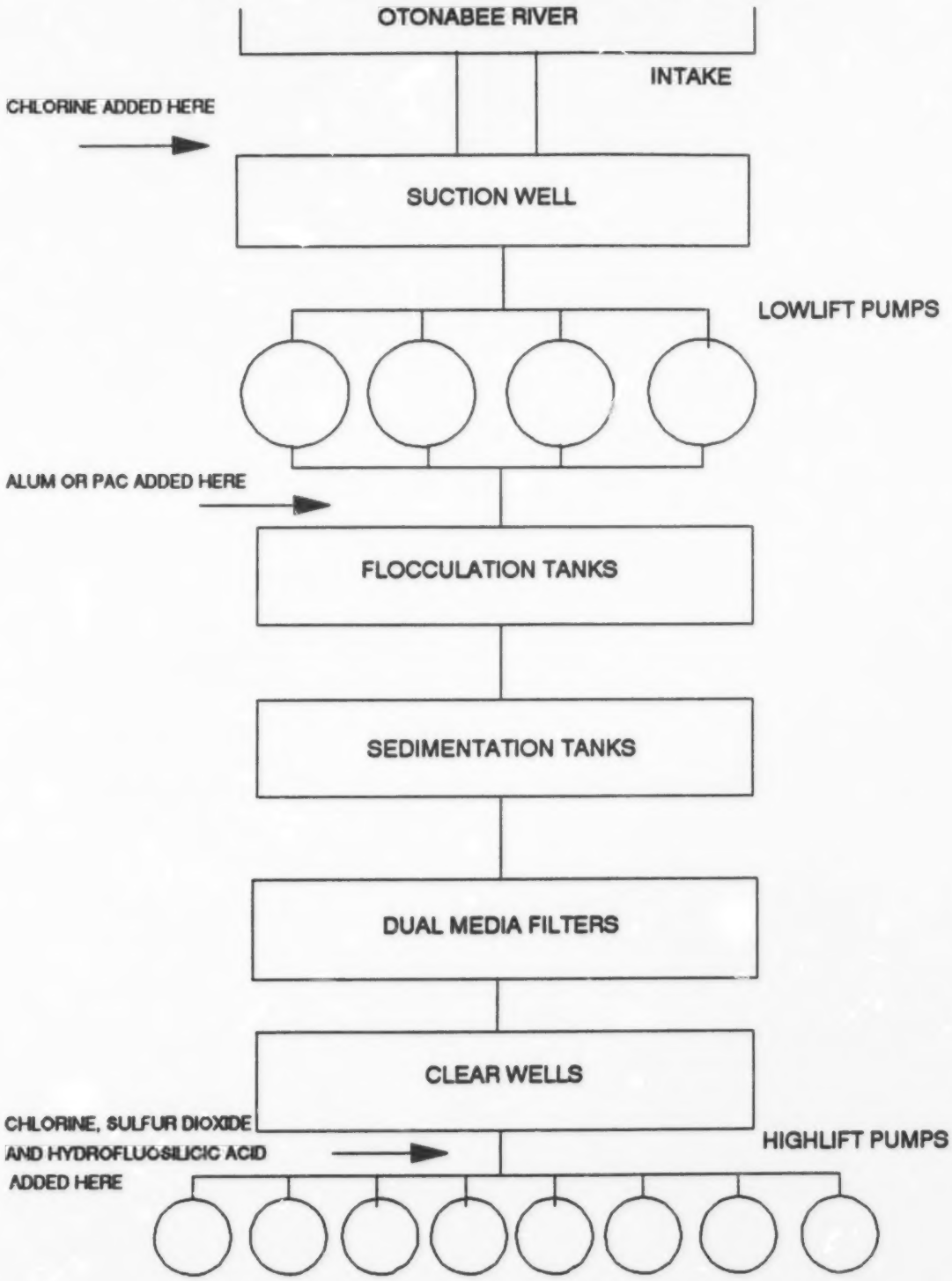

TABLE 2

DRINKING WATER SURVEILLANCE PROGRAM ANNUAL REPORT

GENERAL INFORMATION

PETERBOROUGH WATER SUPPLY SYSTEM

LOCATION:	1867 ASHBURNHAM DRIVE PETERBOROUGH, ONTARIO K91 1P8 (705-748-9300)
SOURCE:	RAW WATER SOURCE - OTONABEE RIVER
RATED CAPACITY:	104 (1000 M^3/DAY)
OPERATION:	MUNICIPALITY
PLANT SUPERINTENDENT:	W. MANLEY
MINISTRY REGION:	CENTRAL
DISTRICT OFFICER:	J.L. BOURQUE

MUNICIPALITY SERVED	POPULATION
PETERBOROUGH	60,800
WOODLAND ACRES	500

been in the household plumbing and service connection for a minimum of sixhours. These samples are used to make an assessment of the amount by which the levels of inorganic compounds and metals may be changed on standing due to leaching from (or deposition on) the plumbing system. The only analyses carried out on the standing samples therefore, are General Chemistry and Metals. The free flow sample represented fresh water from the distribution main that had been flowing from the sample tap for five minutes before being sampled.

Attempts were made to capture the same block of water at each sampling point by taking the retention time into consideration. The retention time was calculated by dividing the volume of water between the two sampling points by the sample day flow. For example, if it was determined that the retention time within the plant was five hours then there would be a five hour interval between the raw and treated sampling. Similarly if it was estimated that it took approximately one day for the water to travel from the plant to the distribution system site, this site would be sampled one day after the treated water from the plant.

Stringent DWSP sampling protocols were followed to ensure that all samples were taken in a uniform manner.

Sample day flow, treatment chemical dosages and Field Chemistry measurements were recorded on the day of sampling and were entered on the DWSP database as submitted.

RESULTS

Water at the Peterborough Water Treatment Plant was sampled for approximately 160 parameters on a monthly basis in 1988. The Specific Pesticides and Chlorophenols scans were sampled in June and November only. Polynuclear Aromatic Hydrocarbons and Phenolics were only analysed in the raw and treated water at the plant. As a result of an unforeseen emergency the laboratory capacity was exceeded and analysis for volatiles could not be carried out when the samples were received. Since analysis for volatiles is no longer valid after four weeks of storage, volatile results for February are not available.

Table 3 contains information on the sample day retention time, flow rate and treatment chemicals used and their associated dosages.

Table 4 is a summary break-down of the number of water samples analysed by parameter and by water type. The number of times that a positive or trace result was detected is also reported.

Positive denotes that the result is greater than the statistical limit of detection established by the Ministry of the Environment (MOE) laboratory staff and is quantifiable. Trace (<T) denotes that the level measured is greater than the lowest value detectable by the method but lies so close to the detection limit that it cannot be confidently quantified.

Table 5 presents the results for parameters detected on at least one

occasion.

Table 6 is a list of all parameters analysed in the DWSP.

Associated guidelines and detection limits are also supplied on both tables. Parameters are listed alphabetically within each scan.

DISCUSSION

General

Water quality is judged by comparison with the Ontario Drinking Water Objectives (ODWOs) as defined in the 1984 publication (ISBN 0-7743-8985-0). The Province of Ontario has health related and aesthetic objectives for 49 parameters, these are currently under review. When an ODWO is not available guidelines/limits from other agencies are consulted. The Parameters Listing System (PALIS) recently published (ISBN 0-7729-4461-X) by the MOE catalogues and keeps current over 1750 guidelines for 650 parameters from agencies throughout the world.

Although some of the parameters measured on DWSP may be present in the raw and treated water as a result of pollution, many of the compounds detected are naturally occuring or are treatment by-products.

Plant operational personnel address occurrences of taste and odour or biological water quality parameters. The DWSP does not assess these aspects of the water supply.

As stated under Results, traces do not indicate quantifiable values, as defined by established MOE Laboratory analytical reporting protocols. The occasional finding of a trace level of a contaminant is thus not considered to be significant. They can be useful in trend analysis or confirmation of the presence of a specific contaminant that is repeatedly detected at these levels. **DISCUSSION OF GUIDELINES AND LIMITS THEREFORE, IS ONLY CONDUCTED ON POSITIVE RESULTS.**

Bacteriology

Positive results for the Bacteriology scan were present nine times in the treated water, three times in the distribution system Site 1 water and fifteen times in the Site 2 water. In most cases the positive parameters were Standard Plate Count, Total Coliform and/or Total Coliform Background.

The presence/absence (P.A.) test determined Coliform bacteria and Aeromonas to be present within 48 hours in the August sample from distribution system Site 2, the same sample showed Total Coliforms at 98 counts/100 mL by the membrane filtration test. The District Officer was notified.

Standard Plate Count is a test used to supplement routine analysis for Coliform bacteria. The limit for Standard Plate Count (at 35°C after 48 hours) in the ODWOs is 500 organisms per mL (based on a geometric mean of 5 or more samples). High Standard Plate Counts were present in the August and September distribution system Site 2 water. Indicators of unsafe water were

also detected in August. This sample also showed a high temperature, 22.5 °C and the lowest chlorine residual recorded in any distribution system sample. Elevated distribution system temperatures and low chlorine residual can lead to bacteria multiplication in the distribution system.

Guidelines for bacteriological sampling and testing of a supply are developed to maintain a proper supervision of its bacteriological quality; the routine monitoring program usually requires the taking of multiple samples in a given system. Full interpretation of bacteriological quality cannot be made on the basis of single samples. Further, bacteriological limits were developed in acknowledgement that the presence of coliforms may be detected due to their non-uniform distribution throughout the distribution system and the fact that their enumeration is subject to considerable variation. For these reasons, the occasional finding of low numbers of coliform organisms is not unexpected. Routine bacteriological monitoring, as outlined in the ODWOs is carried out by the operating authority.

Inorganic and Physical Parameters

Laboratory and Field Chemistry

The results for Laboratory and Field Chemistry scans were below any applicable health related ODWOs .

Colour values exceeded the aesthetic ODWO of 5 True Colour Units (TCU) in five treated water samples, two free flow samples from Site 1 and five from Site 2. Colour in drinking water may be due to the presence of natural

or synthetic organic substances as well as certain metallic ions.

The Langelier Index is used extensively in estimating the corrosion potential of water. An increasingly negative index indicates the increasing possibility of corrosion. It is considered sound engineering practice to maintain a slightly positive Langelier Index. The Langelier Index for Peterborough is variable.

It is desirable that the Temperature of drinking water be less than 15°C; the palatability of water is enhanced by its coolness. A temperature below 15°C will tend to reduce the growth of nuisance organisms and hence minimize associated taste, colour, odour and corrosion problems. The temperature of the delivered water may increase in the distribution system due to the warming effect of the soil in late summer and fall and/or as a result of higher temperatures in the source water. The desired ODWO was exceeded twelve times in the treated water and free flow distributed water.

As part of the treatment process, hydrofluosilicic acid is added to the treated water (Table 3). Where fluoridation is practiced, the Fluoride concentration recommended in the ODWO is 1.2 mg/L, plus or minus 0.2 mg/L. Results indicate that this level was not maintained. The plant has indicated that the fluoride residuals measured at the time of sampling do not confirm those reported by the laboratory, and that they would be willing to adjust the fluoride dosage if the lower values are substantiated.

Metals

The results reported for the Metal scan were below any applicable health related ODWOs.

Elevated levels of Copper, Lead, Nickel and Zinc were detected in the standing samples from the distribution system waters as compared to the free flow samples thus, indicating that small quantities of these metals were leached from the household plumbing as the water stood overnight.
Although the Langelier Index indicates minimal potential for corrosion some metals will be leached in standing samples in most supplies.

At present, there is no evidence that Aluminum is physiologically harmful and no health limit for drinking water has been specified. The measure of residual Aluminum in the treated water is important to indicate the efficiency of the treatment process. The ODWOs indicate that a useful guideline is to maintain a residual below 100 ug/L as Al in the water leaving the plant to avoid problems in the distribution system. Aluminum values exceeded the ODWO operational guideline twenty-six times in the treated water and distributed water. The plant has engaged a consultant to evaluate coagulants and coagulant aids and other aspects of plant operational practice.

Organic Parameters

Chloroaromatics

Results of the Chloroaromatics scan showed that none were detected.

Chlorophenols

Results of the Chlorophenol scan showed that no Chlorophenols were detected.

Pesticides and PCB (Polychlorinated Biphenyl)

Results of the Pesticides and PCB scan showed that no PCBs were detected and that two pesticides were detected:

Alpha BHC

Lindane

There are several isomers of BHC (Benzene Hexachloride); gamma BHC is the active ingredient of the pesticide Lindane, while alpha BHC is the isomer predominantly found in surface waters from the Great Lakes basin.

Alpha BHC was detected at trace levels, four times in the raw water, seven times in the treated water, six times in the Site 1 water, and five times in the Site 2 water.

Lindane was detected at trace levels, twice in the treated water, twice in the Site 1 water and once in the Site 2 water.

Specific Pesticides

Results of the Specific Pesticide scan showed that none were detected.

Phenolics

The maximum desirable concentration of phenolic substances in drinking water is 2.0 ug/L. This limit has been set primarily to prevent the occurrence of

undesirable tastes and odours, particularly in chlorinated water. Phenolics were detected in the raw water at levels ranging from 1.6 ug/L to 3.0 ug/L and in the treated water from 1.2 ug/L to 3.6 ug/L. Phenolics were detected at trace levels, four times in the raw water and three times in the treated water. Phenolic compounds are present in the aquatic environment as a result of natural and/or industrial processes. The high values of phenolics in 1988 may be attributable to high temperatures and low rainfall.

Polynuclear Aromatic Hydrocarbons (PAH)

Results of the PAH scan showed that no PAHs were detected.

Volatiles

Results of the Volatile scan showed that twelve parameters, other than Trihalomethanes(THMs), were detected:

Benzene

Toluene

Ethylbenzene

Para & Meta-Xylene

Ortho-Xylene

Styrene

1,1,1-Trichloroethane

1,1,2-Trichloroethane

Carbon Tetrachloride

Methylene Chloride

Tetrachloroethylene

1,1,2,2-Tetrachloroethylene

Benzene was detected at trace levels, once in the raw water and twice in the treated water.

Toluene was detected several times in both the raw water and treated waters. The detection of toluene at low, trace levels is a laboratory artifact derived from the analytical methodology. The purge-and-trap analytical technique depends on the purging of the volatile organics in the water sample with helium gas onto a Tenax trapping column. The volatile materials are subsequently thermally desorbed, separated and quantified. Tenax, a toluene-like polymeric material, tends to decompose sporadically upon heating into toluene and other aromatic componenets (ethylbenzene and xylene) giving instrument blanks in the order of 0.05 ug/L.

The detected trace levels of Styrene are also considered to be laboratory artifacts due to the outgassing of monomeric styrene from the polystyrene shipping containers. The sporadic background levels from this source are in the order of 0.05 ug/L.

Ethylbenzene was detected at trace levels, seven times in the treated water and four times in the Site 2 water.

Para and Meta-Xylene are reported as one compound, M-Xylene, and were detected at trace levels, once in the treated water, Site 1 water and Site 2 water.

Ortho-Xylene (O-Xylene) was detected at trace levels, once in the treated water and once in both distribution system waters.

These volatiles are typically found on an occasional basis at other water supplies included on the DWSP usually at trace levels.

1,1,1-Trichloroethane was detected at trace levels, once in the raw water and once in the Site 2 water.

1,1,2-Trichloroethane was detected at a trace level, once in the treated water.

Carbon Tetrachloride was detected at a trace level, once in the raw water.

Methylene chloride (Dichloromethane) was detected at trace levels, once in the treated water, once in the Site 1 water and once in the Site 2 water.

Tetrachloroethylene was detected at trace levels, twice in the treated water, once in the Site 1 water and Site 2 water.

1,1,2,2-Tetrachloroethylene was detected at a trace level once in the Site 2 water.

THMs are known to be produced during the water treatment process and will always occur in chlorinated surface waters. THMs are comprised of Chloroform, Chlorodibromomethane and Dichlorobromomethane. Bromoform occurs

occasionally. Results are reported for the individual compounds as well as for total THMs.

Chloroform, Dichlorobromomethane and Total THMs were detected in all treated waters. Chloroform was detected in some raw water samples at low or trace levels. All Total THM occurrences, ranging from 39.95 ug/L to 242.4 ug/L, were below the ODWO of 350 ug/L.

CONCLUSIONS

The Peterborough Water Supply System for the sample year of 1988 produced good quality water at the plant and this was maintained in the distribution system.

No health related guidelines, for organic or inorganic parameters, were exceeded during 1988.

RECOMMENDATIONS

One recommendation can be made:

1) The fluoridation practice should be adjusted to ensure that the recommended levels of Fluoride are maintained in the distributed water.

TABLE 3

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS SAMPLE DAY CONDITIONS FOR 1988

	SAMPLE DAY CONDITIONS		TREATMENT CHEMICAL DOSAGES (MG/L)				
			PRE-CHLORINATION	COAGULATION	POST-CHLORINATION	FLUORIDATION	DECHLORINATION
DATE	RETENTION TIME(HRS)	FLOW (1000 M3)	CHLORINE	POLY ALUMINUM CHLORIDE	CHLORINE	HYDROFLUOSILICIC ACID	SULPHUR DIOXIDE
JAN 12	6.5	43.5	03.02	06.30	00.20	00.79	.
FEB 09	5.7	48.8	04.05	.	.	00.76	00.60
MAR 14	6.2	45.5	04.55	.	.	00.69	00.63
APR 12	6.1	46.3	04.55	.	.	00.79	00.76
MAY 10	5.6	50.4	04.55	08.11	.	00.76	00.10
JUN 14	2.9	98.6	05.05	03.02	.	00.79	00.60
JUL 12	3.8	75.1	05.55	05.55	.	00.79	00.51
AUG 09	4.2	68.2	05.55	04.55	.	00.79	00.51
SEP 13	5.0	56.1	05.05	03.27	.	00.79	00.60
OCT 13	4.8	50.0	04.55	03.02	.	00.79	00.20
NOV 15	5.2	54.5	03.02	03.77	00.10	00.85	.
DEC 06	6.1	46.3	02.52	04.55	00.15	00.85	.

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	RAW			TREATED			SITE 1			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
BACTERIOLOGICAL	AEROMONAS SP	.	.	.	.	.	.	.	.	.	1	1	0
	E. COLI P/A	.	.	.	.	.	.	.	.	.	1	0	0
	FECAL COLIFORM MF	12	10	0	.	.	.	.	.	.	.	.	.
	FECAL COLIFORM	.	.	.	.	.	.	.	.	.	1	0	0
	STANDRD PLATE CNT MF	8	8	0	12	8	0	10	3	0	11	7	0
	P/A BOTTLE	.	.	.	8	0	0	6	0	0	7	1	0
	STAPH AUREUS	.	.	.	.	.	.	.	.	.	1	0	0
	COLIFORM	.	.	.	.	.	.	.	.	.	1	1	0
	TOTAL COLIFORM MF	12	11	0	12	0	0	10	0	0	11	1	0
	T COLIFORM BCKGRD MF	12	11	0	12	1	0	10	0	0	11	4	0
*TOTAL SCAN BACTERIOLOGICAL		44	40	0	44	9	0	36	3	0	45	15	0
*TOTAL GROUP BACTERIOLOGICAL		44	40	0	44	9	0	36	3	0	45	15	0
CHEMISTRY (FLD)	FLD CHLORINE (COMB)	.	.	.	12	12	0	20	20	0	21	21	0
	FLD CHLORINE FREE	.	.	.	12	12	0	20	20	0	22	22	0
	FLD CHLORINE (TOTAL)	.	.	.	12	12	0	20	20	0	22	22	0
	FLD PH	12	12	0	12	12	0	20	20	0	22	22	0
	FLD TEMPERATURE	12	12	0	12	12	0	20	20	0	22	22	0
	FLD TURBIDITY	12	12	0	12	12	0	20	20	0	22	22	0
*TOTAL SCAN CHEMISTRY (FLD)		36	36	0	72	72	0	120	120	0	131	131	0
CHEMISTRY (LAB)	ALKALINITY	11	11	0	12	12	0	20	20	0	22	22	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
CHEMISTRY (LAB)	CALCIUM	12	12	0	12	12	0	20	20	0	22	22	0
	CYANIDE	12	0	0	12	0	0	10	0	0	11	0	0
	CHLORIDE	12	12	0	12	12	0	20	20	0	22	22	0
	COLOUR	11	11	0	12	12	0	20	20	0	22	22	0
	CONDUCTIVITY	11	11	0	12	12	0	20	20	0	22	22	0
	FLUORIDE	12	11	0	12	12	0	20	20	0	22	22	0
	HARDNESS	12	12	0	12	12	0	20	20	0	22	22	0
	IONCAL	12	5	0	12	5	0	20	20	0	22	22	0
	LANGELIERS INDEX	11	11	0	4	4	0	20	8	0	22	10	0
	MAGNESIUM	12	12	0	12	12	0	11	11	0	11	11	0
	SODIUM	12	12	0	12	12	0	20	20	0	22	22	0
	AMMONIUM TOTAL	11	11	0	12	9	1	20	20	0	22	22	0
	NITRITE	11	5	6	12	1	10	20	17	1	22	20	0
	TOTAL NITRATES	11	3	7	12	4	7	20	2	16	22	4	18
	NITROGEN TOT KJELD	12	12	0	12	12	0	20	6	12	22	13	8
	PH	11	11	0	12	12	0	20	20	0	22	22	0
	PHOSPHORUS FIL REACT	11	4	6	12	11	1	20	20	0	22	22	0
	PHOSPHORUS TOTAL	12	8	4	12	7	5	.	.	.	.	.	.
	SULPHATE	5	5	0	5	5	0	.	.	.	.	.	.
	TURBIDITY	11	11	0	12	12	0	8	8	0	10	10	0
*TOTAL SCAN CHEMISTRY (LAB)		235	190	23	237	190	24	349	292	29	384	332	26
METALS	SILVER	12	0	5	12	0	6	20	0	7	22	0	9

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
METALS	ALUMINUM	12	12	0	12	12	0	20	20	0	22	22	0
	ARSENIC	12	0	12	12	0	12	20	0	20	22	0	22
	BARIUM	12	12	0	12	12	0	20	20	0	22	22	0
	BORON	12	3	9	12	3	9	20	3	17	22	7	15
	BERYLLIUM	12	0	5	12	0	5	20	0	7	22	0	7
	CADMIUM	12	0	0	12	0	1	20	0	4	22	0	12
	COBALT	12	0	11	12	0	11	20	0	19	22	0	20
	CHROMIUM	12	4	7	12	5	6	20	4	9	22	8	10
	COPPER	12	12	0	12	0	12	20	20	0	22	22	0
	IRON	12	2	9	12	1	9	20	2	18	22	7	15
	MERCURY	12	4	8	12	5	7	10	3	2	11	1	2
	MANGANESE	12	11	1	12	12	0	20	20	0	22	22	0
	MOLYBDENUM	12	0	12	12	0	12	20	0	20	22	0	22
	NICKEL	12	1	3	12	1	3	20	9	4	22	6	10
	LEAD	12	3	9	12	1	10	20	20	0	22	22	0
	ANTIMONY	12	5	7	12	4	8	20	8	12	22	11	11
	SELENIUM	12	0	7	12	0	9	20	0	16	22	0	15
	STRONTIUM	12	12	0	12	12	0	20	20	0	22	22	0
	TITANIUM	12	12	0	12	11	1	20	19	1	22	22	0
	THALLIUM	12	0	4	12	0	4	20	0	8	22	0	6
	URANIUM	12	6	6	12	8	4	20	8	12	22	11	11
	VANADIUM	12	0	12	12	0	12	20	0	20	22	0	21
	ZINC	12	11	1	12	1	10	20	20	0	22	22	0
*TOTAL SCAN METALS		288	110	128	288	88	151	470	196	196	517	227	208
*TOTAL GROUP INORGANIC & PHYSICAL		559	336	151	597	350	175	939	608	225	1032	690	234

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
CHLOROAROMATICS	HEXACHLOROBUTADIENE	12	0	0	12	0	0	10	0	0	10	0	0
	123 TRICHLOROBENZENE	12	0	0	12	0	0	10	0	0	10	0	0
	1234 T-CHLOROBENZENE	12	0	0	12	0	0	10	0	0	10	0	0
	1235 T-CHLOROBENZENE	12	0	0	12	0	0	10	0	0	10	0	0
	124 TRICHLOROBENZENE	12	0	0	12	0	0	10	0	0	10	0	0
	1245 T-CHLOROBENZENE	12	0	0	12	0	0	10	0	0	10	0	0
	135 TRICHLOROBENZENE	12	0	0	12	0	0	10	0	0	10	0	0
	HCB	12	0	0	12	0	0	10	0	0	10	0	0
	HEXACHLOROETHANE	12	0	0	12	0	0	10	0	0	10	0	0
	OCTACHLOROSTYRENE	12	0	0	12	0	0	10	0	0	10	0	0
	PENTACHLOROBENZENE	12	0	0	12	0	0	10	0	0	10	0	0
	236 TRICHLOROTOLUENE	12	0	0	12	0	0	10	0	0	10	0	0
	245 TRICHLOROTOLUENE	12	0	0	12	0	0	10	0	0	10	0	0
	26A TRICHLOROTOLUENE	12	0	0	12	0	0	10	0	0	10	0	0
*TOTAL SCAN CHLOROAROMATICS		168	0	0	168	0	0	140	0	0	140	0	0
CHLOROPHENOLS	234 TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	2345 T-CHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	2356 T-CHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	245-TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	246-TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	PENTACHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
*TOTAL SCAN CHLOROPHENOLS		12	0	0	12	0	0	0	0	0	0	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
PAH	PHENANTHRENE	11	0	0	11	0	0	.	.	.	.	.	.
	ANTHRACENE	11	0	0	11	0	0	.	.	.	.	.	.
	FLUORANTHENE	11	0	0	11	0	0	.	.	.	.	.	.
	PYRENE	11	0	0	11	0	0	.	.	.	.	.	.
	BENZO(A)ANTHRACENE	11	0	0	11	0	0	.	.	.	.	.	.
	CHRYSENE	11	0	0	11	0	0	.	.	.	.	.	.
	DIMETH. BENZ(A)ANTHR	11	0	0	11	0	0	.	.	.	.	.	.
	BENZO(E) PYRENE	11	0	0	11	0	0	.	.	.	.	.	.
	BENZO(J) FLUORANTHEN	0	0	0	0	0	0	.	.	.	.	.	.
	BENZO(B) FLUORANTHEN	11	0	0	11	0	0	.	.	.	.	.	.
	PERYLENE	11	0	0	11	0	0	.	.	.	.	.	.
	BENZO(K) FLUORANTHEN	11	0	0	11	0	0	.	.	.	.	.	.
	BENZO(A) PYRENE	11	0	0	11	0	0	.	.	.	.	.	.
	BENZO(G,H,I) PERYLEN	11	0	0	11	0	0	.	.	.	.	.	.
	DIBENZO(A,H) ANTHRAC	11	0	0	11	0	0	.	.	.	.	.	.
	INDENO(1,2,3-C,D) PY	11	0	0	11	0	0	.	.	.	.	.	.
	BENZO(B) CHRYSENE	11	0	0	11	0	0	.	.	.	.	.	.
	ANTHANTHRENE	0	0	0	0	0	0	.	.	.	.	.	.
	CORONENE	11	0	0	11	0	0	.	.	.	.	.	.
*TOTAL SCAN PAH		187	0	0	187	0	0	0	0	0	0	0	0
PESTICIDES & PCB	ALDRIN	12	0	0	12	0	0	10	0	0	10	0	0
	ALPHA BHC	12	0	4	12	0	7	10	0	6	10	0	5

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS

SUMMARY TABLE OF RESULTS (1968)

SCAN	PARAMETER	SITE	RAW			TREATED			SITE 1			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
PESTICIDES & PCB	BETA BHC	12	0	0	12	0	0	10	0	0	10	0	0
	LINDANE	12	0	0	12	0	2	10	0	2	10	0	1
	ALPHA CHLORDANE	12	0	0	12	0	0	10	0	0	10	0	0
	GAMMA CHLORDANE	12	0	0	12	0	0	10	0	0	10	0	0
	DIELDRIN	12	0	0	12	0	0	10	0	0	10	0	0
	METHOXYCHLOR	12	0	0	12	0	0	10	0	0	10	0	0
	ENDOSULFAN I	12	0	0	12	0	0	10	0	0	10	0	0
	ENDOSULFAN II	12	0	0	12	0	0	10	0	0	10	0	0
	ENDRIN	12	0	0	12	0	0	10	0	0	10	0	0
	ENDOSULFAN SULPHATE	12	0	0	12	0	0	10	0	0	10	0	0
	HEPTACHLOR EPOXIDE	12	0	0	12	0	0	10	0	0	10	0	0
	HEPTACHLOR	12	0	0	12	0	0	10	0	0	10	0	0
	MIREX	12	0	0	12	0	0	10	0	0	10	0	0
	OXYCHLORDANE	12	0	0	12	0	0	10	0	0	10	0	0
	OPDDT	12	0	0	12	0	0	10	0	0	10	0	0
	PCB	12	0	0	12	0	0	10	0	0	10	0	0
	DDD	12	0	0	12	0	0	10	0	0	10	0	0
	PPDDE	12	0	0	12	0	0	10	0	0	10	0	0
	PPDDT	12	0	0	12	0	0	10	0	0	10	0	0
	AMETRINE	12	0	0	12	0	0	10	0	0	11	0	0
	ATRAZINE	12	0	0	12	0	0	10	0	0	11	0	0
	ATRATONE	12	0	0	12	0	0	10	0	0	11	0	0
	CYANAZINE	12	0	0	12	0	0	10	0	0	11	0	0
	DES ETHYL ATRAZINE	6	0	0	6	0	0	5	0	0	6	0	0
	DES ETHYL SIMAZINE	6	0	0	6	0	0	5	0	0	6	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
PESTICIDES & PCB	PROMETONE	12	0	0	12	0	0	10	0	0	11	0	0
	PROPAZINE	12	0	0	12	0	0	10	0	0	11	0	0
	PROMETRYNE	12	0	0	12	0	0	10	0	0	11	0	0
	METRIBUZIN	12	0	0	12	0	0	10	0	0	11	0	0
	SIMAZINE	12	0	0	12	0	0	10	0	0	11	0	0
	ALACHLOR	12	0	0	12	0	0	10	0	0	11	0	0
	METOLACHLOR	12	0	0	12	0	0	10	0	0	11	0	0
*TOTAL SCAN PESTICIDES & PCB		396	0	4	396	0	9	330	0	8	343	0	6
PHENOLICS	PHENOLICS	12	6	4	12	7	3	.	.	.	.	.	.
*TOTAL SCAN PHENOLICS		12	6	4	12	7	3	0	0	0	0	0	0
SPECIFIC PESTICIDES	TOXAPHENE	0	0	0	0	0	0	0	0	0	0	0	0
	2,4,5-T	2	0	0	2	0	0	.	.	.	.	.	.
	2,4-D	2	0	0	2	0	0	.	.	.	.	.	.
	24DCHLRPHENOXYBUTYRC	2	0	0	2	0	0	.	.	.	.	.	.
	2,4 D PROPIONIC ACID	2	0	0	2	0	0	.	.	.	.	.	.
	DICAMBA	2	0	0	2	0	0	.	.	.	.	.	.
	PICHLORAM	0	0	0	0	0	0	.	.	.	.	.	.
	SILVEX	2	0	0	2	0	0	.	.	.	.	.	.
	DIAZINON	2	0	0	2	0	0	.	.	.	.	.	.

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	SITE	RAW			TREATED			SITE 1			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
SPECIFIC PESTICIDES	DICHLOROVOS	2	0	0	2	0	0	.	.	.	.	.	.
	CHLORPYRIFOS	2	0	0	2	0	0	.	.	.	.	.	.
	ETHION	2	0	0	2	0	0	.	.	.	.	.	.
	AZINPHOS-METHYL	0	0	0	0	0	0	.	.	.	.	.	.
	MALATHION	2	0	0	2	0	0	.	.	.	.	.	.
	MEVINPHOS	2	0	0	2	0	0	.	.	.	.	.	.
	METHYL PARATHION	2	0	0	2	0	0	.	.	.	.	.	.
	METHYLTRITHION	2	0	0	2	0	0	.	.	.	.	.	.
	PARATHION	2	0	0	2	0	0	.	.	.	.	.	.
	PHORATE	2	0	0	2	0	0	.	.	.	.	.	.
	RELDAN	2	0	0	2	0	0	.	.	.	.	.	.
	ROHNEL	2	0	0	2	0	0	.	.	.	.	.	.
	AMINOCARB	0	0	0	0	0	0	.	.	.	.	.	.
	BENOMYL	2	0	0	2	0	0	.	.	.	.	.	.
	BUX	2	0	0	2	0	0	.	.	.	.	.	.
	CARBOFURAN	2	0	0	2	0	0	.	.	.	.	.	.
	CICP	2	0	0	2	0	0	.	.	.	.	.	.
	DIALLATE	2	0	0	2	0	0	.	.	.	.	.	.
	EPTAN	2	0	0	2	0	0	.	.	.	.	.	.
	IPC	2	0	0	2	0	0	.	.	.	.	.	.
	PROPOXUR	2	0	0	2	0	0	.	.	.	.	.	.
	CARBARYL	2	0	0	2	0	0	.	.	.	.	.	.
	BUTYLATE	2	0	0	2	0	0	.	.	.	.	.	.
*TOTAL SCAN SPECIFIC PESTICIDES		56	0	0	56	0	0	0	0	0	0	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
VOLATILES	BENZENE	11	0	1	11	0	2	9	0	0	10	0	0
	TOLUENE	11	0	0	11	2	1	9	1	0	10	2	0
	ETHYLBENZENE	11	0	0	11	0	7	9	0	0	10	0	4
	P-XYLENE	11	0	0	10	0	0	8	0	0	9	0	0
	M-XYLENE	11	0	0	11	0	1	9	0	1	10	0	1
	O-XYLENE	11	0	0	11	0	1	9	0	1	10	0	1
	STYRENE	3	0	1	3	0	2	3	0	0	3	0	3
	1,1 DICHLOROETHYLENE	11	0	0	11	0	0	9	0	0	10	0	0
	METHYLENE CHLORIDE	11	0	0	11	1	0	9	1	0	10	1	0
	T1,2DICHLOROETHYLENE	11	0	0	11	0	0	9	0	0	10	0	0
	1,1 DICHLOROETHANE	11	0	0	11	0	0	9	0	0	10	0	0
	CHLOROFORM	11	1	3	11	11	0	9	9	0	10	10	0
	111, TRICHLOROETHANE	11	0	1	11	0	0	9	0	0	10	0	1
	1,2 DICHLOROETHANE	11	0	0	11	0	0	9	0	0	10	0	0
	CARBON TETRACHLORIDE	11	0	1	11	0	0	9	0	0	10	0	0
	1,2 DICHLOROPROPANE	11	0	0	11	0	0	9	0	0	10	0	0
	TRICHLOROETHYLENE	11	0	0	11	0	0	9	0	0	10	0	0
	DICHLOROBROMOMETHANE	11	0	1	11	11	0	9	9	0	10	10	0
	112 TRICHLOROETHANE	11	0	0	11	0	1	9	0	0	10	0	0
	CHLORODIBROMOMETHANE	11	0	0	11	0	9	9	1	7	10	1	8
	T-CHLOROETHYLENE	11	0	0	10	0	2	8	0	1	9	0	1
	BROMOFORM	11	0	0	11	0	0	9	0	0	10	0	0
	1122 T-CHLOROETHANE	11	0	0	11	0	0	9	0	0	10	0	1
	CHLOROBENZENE	11	0	0	11	0	0	9	0	0	10	0	0
	1,4 DICHLOROBENZENE	11	0	0	11	0	0	9	0	0	10	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	SITE	RAW		TREATED			SITE 1			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
VOLATILES	1,3 DICHLOROBENZENE	11	0	0	11	0	0	9	0	0	10	0	0
	1,2 DICHLOROBENZENE	11	0	0	11	0	0	9	0	0	10	0	0
	TRIFLUOROCHLOROTOLUE	5	0	0	5	0	0	4	0	0	4	0	0
	ETHLYENE DIBROMIDE	11	0	0	11	0	0	9	0	0	10	0	0
	TOTL TRIHALOMETHANES	11	0	2	11	11	0	9	9	0	10	10	0
*TOTAL SCAN VOLATILES		316	1	10	314	36	26	257	30	10	285	34	20
*TOTAL GROUP ORGANIC		1147	7	18	1145	43	38	727	30	18	768	34	26
TOTAL		1750	383	169	1786	402	213	1702	641	243	1845	739	260

KEY TO TABLE 5 and 6

A ONTARIO DRINKING WATER OBJECTIVES (ODWO)
1. Maximum Acceptable Concentration (MAC)
1+. MAC for Total Trihalomethanes
1*. MAC for Bacteriological Analyses
Poor water quality is indicated when :
- total coliform counts > 0 < 5
- P/A Bottle Test is present after 48 hours
- Aeromonas organisms are detected in more than 25% of samples in a single submission or in successive submissions from the same sampling site
- Pseudomonas Aeruginosa, Staphylococcus Aureus and members of the Fecal Streptococcus group should not be detected in any sample
- Standard Plate Count should not exceed 500 organisms per ml at 35 ^{0}C within 48 hours

2. Interim Maximum Acceptable Concentration (IMAC)
3. Maximum Desirable Concentration (MDC)
4. Aesthetic or Recommended Operational Guideline
- hardness levels between 80 and 100 mg/L as calcium carbonate are considered to provide an acceptable balance between corrosion and incrustation, water supplies with a hardness >200 mg/L are considered poor and those in excess of 500 mg/L are unacceptable.

B HEALTH & WELFARE CANADA (H&W)
1. Maximum Acceptable Concentration (MAC)
2. Proposed MAC
3. Interim MAC
4. Aesthetic Objective (AO) (for xylenes, the AO is a total)

C WORLD HEALTH ORGANIZATION (WHO)
1. Guideline Value (GV)
2. Tentative GV
3. Aesthetic GV

D US ENVIRONMENTAL PROTECTION AGENCY (EPA)
1. Maximum Contaminant Level (MCL)
2. Suggested No-Adverse Effect Level (SNAEL)
3. Lifetime Health Advisory
4. EPA Ambient Water Quality Criteria

F EUROPEAN ECONOMIC COMMUNITY (EEC)
1. Health Related Guideline Level
2. Aesthetic Guideline Level
3. Maximum Admissable Concentration (MADC)

G CALIFORNIA STATE DEPARTMENT OF HEALTH-GUIDELINE VALUE

H USSR MAXIMUM PERMISSIBLE CONCENTRATION

I NEW YORK STATE AMBIENT WATER GUIDELINE

N/A NONE AVAILABLE

INTERPRETATION OF DATA

The interpretation of analytical results that are obtained from measurements near the limit of detection of the measurement process is subject to greater uncertainty than those at higher concentrations. The principle areas of concern relate to whether the substance has actually been detected, whether it has been properly identified, and whether it is an artifact of the measurement process. In other words, false positives can be caused by the instrumentation or the test procedures used, when in fact these compounds are not present in the sample.

There are several methods to treat data from such measurements:
1. Exclude the low-level data because of this uncertainty factor. However, studies of long-term environmental trends and modelling may be adversely affected by exclusion of such data.
2. Qualify these data so the user is aware of the greater uncertainty associated with their use.

For the Drinking Water Surveillance Program, measurements near the limit of detection of the measurement process are reported qualified by the code "<T". Results quantified by "W" indicate a zero measurement. These results are reported for purposes of modelling and long-term trend analysis and no significance should be attributed to a single determination of a substance below "T" (a single determination may well be a false positive). Repeat analysis or additional data are needed before it can be stated with certainty that the substance in question was truly present. On the other hand, it is less likely that repeated detection of a substance at or near the limit of detection at a specific location is solely due to an artifact in the measurement system, and more likely represents a true positive. However the average of such data is still only an estimate of the amount of substance present subject to the possible biases of the method used.

LABORATORY RESULTS, REMARK DESCRIPTIONS

.	No Sample Taken
BDL	Below Minimum Measurable Amount
<T	Greater Than Detection Limit But Not Confident (SEE INTERPRETATION OF RESULTS ABOVE)
>	Results Are Greater Than The Upper Limit
<=>	Approximate Result
!AW	No Data: Analysis Withdrawn
!CR	No Data: Could Not Confirm By Reanalysis
!CS	No Data: Contamination Suspected
!IL	No Data: Sample Incorrectly Labelled
!IS	No Data: Insufficient Sample
!LA	No Data: Laboratory Accident

!LD	No Data: Test Queued After Sample Discarded
!NA	No Data: No Authorization To Perform Reanalysis
!NP	No Data: No Procedure
!NR	No Data: Sample Not Received
!OP	No Data: Obscured Plate
!QU	No Data: Quality Control Unacceptable
!PE	No Data: Procedural Error - Sample Discarded
!PH	No Data: Sample pH Outside Valid Range
!RE	No Data: Received Empty
!RO	No Data: See Attached Report (no numeric results)
!SM	No Data: Sample Missing
!SS	No Data: Send Separate Sample Properly Preserved
!UI	No Data: Indeterminant Interference
!TX	No Data: Time Expired
A3C	Approximate, Total Count Exceeded 300 Colonies
APL	Additional Peak, Large, Not Priority Pollutant
APS	Additional Peak, Less Than, Not Priority Pollutant
CIC	Possible Contamination, Improper Cap
CRO	Calculated Result Only
PPS	Test Performed On Preserved Sample
RMP	P and M-Xylene Not Separated
RRV	Rerun Verification
RVU	Reported Value Unusual
SPS	Several Peaks, Small, Not Priority Pollutant
UAL	Unreliable: Sample Age Exceeds Normal Limit
UCR	Unreliable: Could Not Confirm By Reanalysis
UCS	Unreliable: Contamination Suspected
UIN	Unreliable: Indeterminant Interference
XP	Positive After X Number of Hours
T# (T06)	Result Taken After # Hours

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
			SITE 1		SITE 2	
	RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
BACTERIOLOGICAL						
AEROMONAS SP (0=ABSENT)			DET'N LIMIT = N/A		GUIDELINE = 0 (A1)	
AUG	.	.	.	.	.	1
E. COLI P/A (0=ABSENT)			DET'N LIMIT = N/A		GUIDELINE = N/A	
AUG	.	.	.	.	.	0
FECAL COLIFORM MF (CT/100ML)			DET'N LIMIT = 0		GUIDELINE = 0 (A1)	
JAN	0	.	.	.	.	.
FEB	2	.	.	.	.	.
MAR	6	.	.	.	.	.
APR	1	.	.	.	.	.
MAY	1	.	.	.	.	.
JUN	5	.	.	.	.	.
JUL	1	.	.	.	.	.
AUG	12	.	.	.	.	.
SEP	0	.	.	.	.	.
OCT	13 T24	.	.	.	.	.
NOV	5 T48	.	.	.	.	.
DEC	1 T48	.	.	.	.	.
FECAL COLIFORM (0=ABSENT)			DET'N LIMIT = N/A		GUIDELINE = 0 (A1)	
AUG	.	.	.	.	.	0
STANDRD PLATE CNT MF (CT/ML)			DET'N LIMIT = 0		GUIDELINE = 500/ML (A1)	
JAN	176	2	.	5	.	3
FEB	137	2	.	0	.	0
MAR	370	31	.	.	.	.
APR	840	5	.	0	.	7
MAY	2400 >	2	.	6	.	3
JUN	2400 >	23	.	39	.	0
JUL	14000	7	.	0	.	420
AUG	2400 >	5	.	.	.	1800
SEP	.	0	.	0 <=>	.	500 >
OCT	.	0 <=>	.	1 <=>	.	68 T24
NOV	.	4 <=>	.	0 <=>	.	0 <=>
DEC	.	1 <=>	.	1 <=>	.	4 <=>
P/A BOTTLE (0=ABSENT)			DET'N LIMIT = 0		GUIDELINE = 0 (A1*)	
JAN	.	0	.	0	.	0

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	.	0	.	0	.	0
MAR	.	0	.	.	.	.
APR	.	0	.	0	.	0
MAY	.	0	.	0	.	0
JUN	.	0	.	0	.	0
JUL	.	0	.	0	.	0
AUG	.	0	.	.	.	1
STAPH AUREUS (0=ABSENT)			DET'N LIMIT = N/A	GUIDELINE = 0 (A1)		
AUG	.	.	.	.	.	0
COLIFORM (0=ABSENT)			DET'N LIMIT = N/A	GUIDELINE = 0 (A1)		
AUG	.	.	.	.	.	1
TOTAL COLIFORM MF (CT/100ML)			DET'N LIMIT = 0	GUIDELINE = 5/100ML(A1)		
JAN	11 A3C	0	.	0	.	0
FEB	3 A3C	0	.	0	.	0
MAR	77 A3C	0	.	.	.	.
APR	28 A3C	0	.	0	.	0
MAY	20 A3C	0	.	0	.	0
JUN	66 A3C	0	.	0	.	0
JUL	24 A3C	0	.	0	.	0
AUG	46 A3C	0	.	.	.	98 A3C
SEP	0	0	.	0 T48	.	0 T48
OCT	200 A3C	0 T24	.	0 T24	.	0 T24
NOV	74 A3C	0 T48	.	0 T48	.	0 T48
DEC	52 A3C	0 T48	.	0 T24	.	0 T24
T COLIFORM BCKGRD MF (CT/100ML)			DET'N LIMIT = 0	GUIDELINE = N/A		
JAN	480	0	.	0	.	0
FEB	700	0	.	0	.	0
MAR	320	0	.	.	.	.
APR	2200	0	.	0	.	0
MAY	2400 >	0	.	0	.	0
JUN	1200	0	.	0	.	0
JUL	2200	0	.	0	.	11
AUG	5600	0	.	.	.	1100
SEP	0	0	.	0 T48	.	6 T48
OCT	7000 T24	1 T24	.	0 T24	.	1 T24
NOV	4800 >	0 T48	.	0 T48	.	0 T48
DEC	9600 >	0 T48	.	0 T24	.	0 T24

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DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
CHEMISTRY (FLD)						
FLD CHLORINE (COMB) (MG/L)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.	.280	.200	.200	.100	.500
FEB	.	.280	.200	.200	.200	.400
MAR	.	.250	.	.	.	.
APR	.	.250	.400	.400	.100	.200
MAY	.	.250	.600	.600	.100	.500
JUN	.	.330	.200	.400	.100	.200
JUL	.	.320	.200	.200	.100	.100
AUG	.	.300	.	.	.	.100
SEP	.	.350	.200	.400	.100	.200
OCT	.	.360	.800	.200	.100	.200
NOV	.	.260	.200	.200	.100	.100
DEC	.	.270	.200	.200	.100	.100
FLD CHLORINE FREE (MG/L)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.	1.170	.500	.900	.100	.400
FEB	.	1.320	.100	.900	.200	.400
MAR	.	1.200	.	.	.	.
APR	.	1.250	.300	1.100	.200	.400
MAY	.	1.050	.300	1.100	.200	.200
JUN	.	1.120	.700	1.100	.100	.200
JUL	.	.980	.300	.900	.200	.200
AUG	.	.900	.	.	.100	.100
SEP	.	1.250	.700	.900	.100	.200
OCT	.	1.190	.300	1.300	.100	.200
NOV	.	1.140	.300	.900	.100	.300
DEC	.	1.080	.100	1.100	.100	.200
FLD CHLORINE (TOTAL) (MG/L)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.	1.450	.700	1.100	.200	.900
FEB	.	1.600	.300	1.100	.400	.800
MAR	.	1.450	.	.	.	.
APR	.	1.500	.700	1.500	.300	.600
MAY	.	1.300	.900	1.700	.100	.700
JUN	.	1.450	.900	1.500	.200	.400
JUL	.	1.300	.500	1.100	.300	.300
AUG	.	1.200	.	.	.100	.200
SEP	.	1.600	.900	1.300	.200	.400
OCT	.	1.550	1.100	1.500	.200	.400
NOV	.	1.400	.500	1.100	.200	.400
DEC	.	1.350	.300	1.300	.200	.300

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	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
FLD PH (DIMENSLESS)			DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5(A4)	
JAN	8.100	7.500	7.200	7.200	7.400	7.400
FEB	7.900	7.350	7.400	7.200	7.500	7.300
MAR	7.800	7.250	.	.	.	.
APR	7.850	7.200	7.400	7.200	7.400	7.500
MAY	8.050	7.200	7.400	7.400	7.300	7.300
JUN	7.950	7.200	7.400	7.400	7.300	7.300
JUL	8.000	7.100	7.400	7.200	7.500	7.500
AUG	7.870	7.250	.	.	7.400	7.300
SEP	8.150	7.200	7.400	7.400	7.500	7.500
OCT	8.050	7.250	7.400	7.400	7.400	7.300
NOV	7.850	7.100	7.400	7.200	7.300	7.300
DEC	7.900	7.300	7.400	7.200	7.300	7.300
FLD TEMPERATURE (DEG.C)			DET'N LIMIT = N/A		GUIDELINE = 15 (A1)	
JAN	.300	.300	12.000	3.000	19.000	5.000
FEB	.300	.600	15.000	4.500	18.000	5.500
MAR	.600	.900	.	.	.	.
APR	4.400	6.000	13.000	7.500	21.000	9.300
MAY	13.900	15.000	14.000	13.000	20.500	11.000
JUN	18.900	18.000	18.000	17.000	22.000	16.500
JUL	26.700	26.000	21.000	23.500	24.000	20.500
AUG	27.500	26.500	.	.	24.000	22.500
SEP	18.000	18.000	20.000	19.000	24.000	19.500
OCT	12.000	11.500	18.000	15.000	24.000	16.000
NOV	5.600	5.800	17.500	9.000	20.500	12.500
DEC	.800	1.000	14.000	5.000	19.500	9.000
FLD TURBIDITY (FTU)			DET'N LIMIT = N/A		GUIDELINE = 1.0 (A1)	
JAN	.400	.180	.220	.190	.250	.220
FEB	.360	.270	.450	.300	.380	.310
MAR	.350	.260	.	.	.	.
APR	.900	.330	.540	.370	.680	.390
MAY	.600	.290	.290	.260	.390	.260
JUN	.920	.350	.420	.370	.450	.380
JUL	1.040	.220	.370	.300	.360	.350
AUG	1.200	.310	.	.	.480	.420
SEP	.850	.190	.310	.230	.200	.170
OCT	.810	.250	.330	.260	.380	.270
NOV	.600	.200	.280	.200	.330	.300
DEC	.680	.230	.290	.280	.340	.380

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DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
CHEMISTRY (LAB)						
ALKALINITY (MG/L)			DET'N LIMIT = .200		GUIDELINE = 30-500 (A4)	
JAN	88.200	79.900	80.000	79.600	79.500	79.100
FEB	90.800	81.400	81.400	80.600	82.200	81.400
MAR	91.000	80.000	.	.	.	.
APR	78.300	66.500	67.900	69.100	69.300	68.100
MAY	IUR	77.100	77.900	77.100	78.800	77.900
JUN	86.300	76.400	78.000	77.400	76.600	77.600
JUL	85.600	74.600	74.200	74.000	75.500	74.400
AUG	84.800	74.100	.	.	73.900	73.000
SEP	80.500	70.800	70.300	70.900	71.500	70.600
OCT	78.400	69.800	70.400	69.800	70.700	70.500
NOV	74.100	65.800	67.000	65.900	66.500	66.000
DEC	74.000	65.600	65.900	68.700	65.800	68.300
CALCIUM (MG/L)			DET'N LIMIT = .100		GUIDELINE = 100 (F2)	
JAN	35.000	35.600	36.000	35.400	36.000	35.000
FEB	36.800	36.200	36.600	36.800	37.400	37.200
MAR	35.600	35.000	.	.	.	.
APR	31.400	31.000	30.800	30.400	32.600	31.200
MAY	36.000	35.400	34.800	35.400	35.800	35.800
JUN	35.200	34.600	35.400	35.[illegible]00	35.600	35.000
JUL	34.100	36.000	37.400	38.400	37.400	34.400
AUG	33.400	33.000	.	.	32.800	33.600
SEP	33.200	33.400	33.800	32.000	34.200	33.400
OCT	31.400	32.800	32.200	31.800	33.400	34.600
NOV	29.600	30.000	29.600	31.600	31.800	31.000
DEC	30.000	31.200	31.800	30.400	29.200	31.000
CHLORIDE (MG/L)			DET'N LIMIT = .200		GUIDELI[illegible] = 250 (A3)	
JAN	7.200	11.900	11.700	11.600	12.200	11.800
FEB	7.800	11.600	12.000	11.700	12.100	11.700
MAR	8.000	12.000	.	.	.	.
APR	6.400	10.800	10.500	10.300	11.800	10.600
MAY	8.500	14.000	14.500	14.400	14.300	14.600
JUN	7.400	13.100	12.900	12.800	13.400	13.000
JUL	6.700	12.900	13.400	13.100	13.300	13.400
AUG	5.900	12.200	.	.	12.000	12.300
SEP	6.200	11.600	11.800	11.600	12.000	11.600
OCT	6.500	11.200	11.600	11.400	11.600	11.600
NOV	6.700	10.700	10.900	10.800	11.100	10.600
DEC	6.600	10.600	10.800	10.700	10.800	10.600

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	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
COLOUR (TCU)			DET'N LIMIT = .5		GUIDELINE = 5.0 (A3)	
JAN	12.500	4.500	5.500	4.500	5.500	4.500
FEB	13.000	6.500	8.000	7.500	8.500	7.000
MAR	15.500	8.000	.	.	.	.
APR	13.000	5.500	8.000	7.000	9.000	7.500
MAY	IUR	5.500	5.500	4.000	6.500	5.000
JUN	14.500	6.000	7.000	5.000	7.500	6.500
JUL	12.000	3.500	5.000	4.500	5.000	5.000
AUG	11.000	3.500	.	.	5.000	4.500
SEP	10.000	3.500	5.000	4.000	5.000	5.000
OCT	10.500	4.500	5.500	4.500	6.000	6.000
NOV	9.500	4.000	5.000	4.000	6.000	5.000
DEC	10.500	4.000	5.000	4.000	5.500	5.500
CONDUCTIVITY (UMHO/CM)			DET'N LIMIT = 1		GUIDELINE = 400 (F2)	
JAN	219	229	226	226	231	225
FEB	231	237	237	236	242	237
MAR	230	234	.	.	.	.
APR	197	201	199	198	212	206
MAY	IUR	233	232	232	235	232
JUN	216	223	225	223	228	231
JUL	213	221	225	221	228	222
AUG	206	215	.	.	218	217
SEP	199	205	206	206	211	206
OCT	198	204	206	205	214	206
NOV	190	195	198	196	199	196
DEC	191	193	196	204	198	200
FLUORIDE (MG/L)			DET'N LIMIT = .01		GUIDELINE = 2.400 (A1)	
JAN	.060	1.280	1.080	1.100	1.080	1.080
FEB	.060	1.120	.980	1.000	1.040	1.020
MAR	.070	1.110	.	.	.	.
APR	.050	1.090	.930	.870	1.090	1.090
MAY	BDL	1.040	.910	.930	1.040	1.100
JUN	.060	.650	.810	.830	.740	.720
JUL	.050	.670	.910	1.020	.810	.800
AUG	.070 RRV	.070 RRV	.	.	.490 RRV	.640 RRV
SEP	.100	.740	.880	.900	.840	.780
OCT	.060	.760	.740	.760	.740	.720
NOV	.060	1.060	1.220	1.140	1.180	1.180
DEC	.080	.820	1.060	.940	.920	.900
HARDNESS (MG/L)			DET'N LIMIT = .500		GUIDELINE = 80-100 (A4)	

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	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
JAN	102.000	104.000	105.000	104.000	105.000	102.000
FEB	108.000	107.000	108.000	109.000	110.000	109.000
MAR	105.000	103.000	.	.	.	.
APR	92.000	91.000	90.000	89.000	94.000	91.000
MAY	103.000	101.000	99.000	100.000	101.000	102.000
JUN	100.000	98.000	101.000	101.000	101.000	99.000
JUL	98.800	103.000	106.000	108.000	105.000	99.000
AUG	97.000	96.000	.	.	96.000	97.000
SEP	96.000	98.000	98.000	93.500	99.000	97.000
OCT	92.000	95.000	94.000	93.000	97.000	100.000
NOV	86.000	86.000	85.000	91.000	92.000	90.000
DEC	89.000	93.000	94.000	91.000	87.000	92.000
IONCAL (DIMENSIONLESS)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
FEB	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
MAR	.000 NAF	.000 NAF	.	.	.	.
APR	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
MAY	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
JUN	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
JUL	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
AUG	.127	.109	.	.	.112	2.594
SEP	4.575	6.162	6.370	1.861	5.926	6.045
OCT	.142	5.370	2.552	2.953	4.842	8.087
NOV	4.604	.225	2.946	4.682	4.628	4.593
DEC	1.858	4.493	4.932	1.057	2.005	.196
LANGELIERS INDEX (DIMENSIONLESS)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.122 NAF	.147 NAF	.111 NAF	.150 NAF	.135 NAF	.147 NAF
FEB	.232 NAF	-.135 NAF	-.040 NAF	-.102 NAF	-.079 NAF	-.113 NAF
MAR	.239 NAF	.126 NAF	.	.	.	.
APR	.002 NAF	.386 NAF	.289 NAF	.297 NAF	.261 NAF	.315 NAF
MAY	.	.027 NAF	.091 NAF	.004 NAF	.027 NAF	.043 NAF
JUN	.266 NAF	-.017 NAF	.071 NAF	.024 NAF	.025 NAF	.022 NAF
JUL	.260 NAF	-.069 NAF	-.036 NAF	-.065 NAF	-.020 NAF	-.080 NAF
AUG	.110	-.117	.	.	-.242	-.247
SEP	.167	-.038	.094	.013	-.036	.060
OCT	.232	-.032	.033	-.016	-.032	.115
NOV	.015	-.303	-.272	-.250	-.194	-.267
DEC	.140	-.156	-.137	-.022	-.096	.086
MAGNESIUM (MG/L)			DET'N LIMIT = .050		GUIDELINE = 30 (F2)	
JAN	3.600	3.800	3.700	3.800	3.700	3.700

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	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE			SITE 1		SITE 2	
TYPE	RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	3.900	4.000	3.900	4.000	4.000	3.900
MAR	3.900	4.000	.	.	.	.
APR	3.200	3.300	3.200	3.100	3.200	3.200
MAY	3.100	2.900	2.900	2.900	3.000	3.000
JUN	2.900	2.900	3.100	2.900	2.900	2.800
JUL	3.330	3.000	3.000	3.000	2.800	3.200
AUG	3.200	3.400	.	.	3.400	3.300
SEP	3.300	3.400	3.300	3.300	3.300	3.300
OCT	3.200	3.300	3.300	3.400	3.300	3.300
NOV	2.800	2.800	2.800	2.900	3.000	3.100
DEC	3.400	3.600	3.500	3.700	3.500	3.400
SODIUM (MG/L)			DET'N LIMIT = .200		GUIDELINE = 200 (C3)	
JAN	4.000	4.000	4.200	4.200	4.200	4.000
FEB	4.200	4.400	4.400	4.200	4.400	4.200
MAR	4.400	4.400	.	.	.	.
APR	3.400	3.200	3.200	3.000	3.400	3.400
MAY	4.400	4.600	4.200	4.200	4.200	4.000
JUN	4.000	4.200	4.200	4.000	4.000	3.800
JUL	3.930	3.800	3.800	3.800	3.800	4.000
AUG	3.800	3.800	.	.	3.800	4.000
SEP	3.800	3.600	3.600	3.600	3.600	3.800
OCT	3.600	3.600	3.600	3.600	3.600	3.600
NOV	3.000	3.200	3.200	3.400	3.600	3.600
DEC	3.800	3.600	3.800	3.600	3.800	3.400
AMMONIUM TOTAL (MG/L)			DET'N LIMIT = 0.002		GUIDELINE = .05 (F2)	
JAN	.034	.016	.022	.014	.366	.020
FEB	.018	.010	.034	.014	.214	.014
MAR	.012	.022	.	.	.	.
APR	.010	.018	.022	.022	.440	.016
MAY	IUR	.014	.040	.022	.250	.020
JUN	.040	.012	.028	.014	.236	.012
JUL	.030	BDL	.014	BDL	.268	BDL
AUG	.018	BDL	.	.	.198	.014
SEP	.048	.016	.010	.006 <T	.236	.014
OCT	.042	.028	.040	.030	.604	.030
NOV	.032	.008 <T	BDL	.010	.124	BDL
DEC	.032	.016	.038	.018	.116	.012
NITRITE (MG/L)			DET'N LIMIT = 0.001		GUIDELINE = 1.000 (A1)	
JAN	.002 <T	BDL	BDL	BDL	.002 <T	.002 <T

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	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	.016	.001 <T	.002 <T	.001 <T	.002 <T	.001 <T
MAR	.044	.013	.	.	.	.
APR	.034	.002 <T	.002 <T	.002 <T	.002 <T	.002 <T
MAY	IUR	.002 <T	.003 <T	.003 <T	.002 <T	.003 <T
JUN	.006	.001 <T	.002 <T	.002 <T	.002 <T	.001 <T
JUL	.003 <T	.001 <T	.002 <T	.001 <T	.002 <T	.001 <T
AUG	.008	.004 <T	.	.	.005	.003 <T
SEP	.003 <T	.003 <T	.003 <T	.003 <T	.004 <T	.002 <T
OCT	.004 <T	.003 <T	.004 <T	.003 <T	.005	.004 <T
NOV	.004 <T	.004 <T	.008	.008	.007	.006
DEC	.004 <T	.002 <T	.002 <T	.002 <T	.003 <T	.003 <T
TOTAL NITRATES (MG/L)			DET'N LIMIT = .020		GUIDELINE = 10.000 (A1)	
JAN	.090 <T	.090 <T	.085 <T	.065 <T	.475	.045 <T
FEB	.135	.110	.105	.095 <T	.355	.090 <T
MAR	.260	.215	.	.	.	.
APR	.215	.180	.180	.175	.670	.175
MAY	IUR	.215	.190	.195	.445	.185
JUN	.095 <T	.090 <T	.105	.095 <T	.395	.090 <T
JUL	.060 <T	.040 <T	.050 <T	.045 <T	.380	.040 <T
AUG	.050 <T	.025 <T	.	.	.280	.025 <T
SEP	.025 <T	.025 <T	.030 <T	.025 <T	.360	.025 <T
OCT	BDL	BDL	BDL	BDL	.620	BDL
NOV	.060 <T	.060 <T	.060 <T	.060 <T	.255	.060 <T
DEC	.025 <T	.020 <T	.025 <T	.025 <T	.195	.025 <T
NITROGEN TOT KJELD (MG/L)			DET'N LIMIT = .020		GUIDELINE = N/A	
JAN	.370	.270	.380	.310	.760	.270
FEB	.340	.320	.360	.320	.650	.310
MAR	.430	.370	.	.	.	.
APR	.330	.300	.320	.330	.830	.290
MAY	.820	.310	.390	.270	.570	.320
JUN	.410	.320	.490	.340	.600	.320
JUL	.410	.310	.450	.330	.660	.300
AUG	.390	.370	.	.	.590	.350
SEP	.390	.310	.360	.320	.570	.330
OCT	.350	.270	.400	.280	.940	.190
NOV	.390	.320	.310	.320	.430	.330
DEC	.360	.150	.410	.290	.380	.310
PH (DIMSNLESS)			DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5(A4)	
JAN	8.040	7.810	7.840	7.810	7.820	7.820

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE			SITE 1		SITE 2	
TYPE	RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	8.120	7.810	7.900	7.840	7.850	7.820
MAR	8.140	7.840	.	.	.	.
APR	8.010	7.700	7.790	7.780	7.790	7.760
MAY	IUR	7.950	8.070	7.980	7.990	8.010
JUN	8.190	7.970	8.040	7.990	8.000	8.000
JUL	8.200	7.910	7.930	7.890	7.940	7.920
AUG	8.060	7.900	.	.	7.780	7.770
SEP	8.140	7.990	8.120	8.060	7.980	8.090
OCT	8.240	8.010	8.080	8.040	8.000	8.130
NOV	8.070	7.800	7.830	7.830	7.880	7.820
DEC	8.190	7.930	7.940	8.060	8.020	8.160
PHOSPHORUS FIL REACT (MG/L)		DET'N LIMIT = .0005		GUIDELINE = N/A		
JAN	.001 <T	.002	.	.	.	.
FEB	.000 <T	.004	.	.	.	.
MAR	.001 <T	.002	.	.	.	.
APR	.002	.004	.	.	.	.
MAY	IUR	.003	.	.	.	.
JUN	.004	.005	.	.	.	.
JUL	.003	.003	.	.	.	.
AUG	.000 <T	.000 <T	.	.	.	.
SEP	BDL	.003	.	.	.	.
OCT	.004	.008	.	.	.	.
NOV	.001 <T	.005	.	.	.	.
DEC	.001 <T	.004	.	.	.	.
PHOSPHORUS TOTAL (MG/L)		DET'N LIMIT = .002		GUIDELINE = .40 (F2)		
JAN	.006 <T	.004 <T	.	.	.	.
FEB	.007 <T	.010	.	.	.	.
MAR	.006 <T	.010	.	.	.	.
APR	.013	.011	.	.	.	.
MAY	.017	.012	.	.	.	.
JUN	.016	.014	.	.	.	.
JUL	.018	.009 <T	.	.	.	.
AUG	.010	.003 <T	.	.	.	.
SEP	.015	.008 <T	.	.	.	.
OCT	.011	.010	.	.	.	.
NOV	.015	.012	.	.	.	.
DEC	.006 <T	.002 <T	.	.	.	.
SULPHATE (MG/L)		DET'N LIMIT = .200		GUIDELINE = 500. (A3)		
AUG	11.220	12.590	.	.	12.610	12.560

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
SEP	10.500	11.400	11.900	11.600	11.400	11.700
OCT	11.300	12.000	12.100	12.000	12.200	12.400
NOV	12.000	12.000	12.000	12.000	12.000	12.000
DEC	15.000	15.000	15.500	15.500	15.500	15.000
TURBIDITY (FTU)			DET'N LIMIT = .02		GUIDELINE = 1.00 (A1)	
JAN	.340	.120	.180	.110	.200	.110
FEB	.280	.320	.480	.350	.580	.310
MAR	.700	.390	.	.	.	.
APR	1.150	.370	.550	.410	1.000	.380
MAY	IUR	.320	.420	.280	.470	.270
JUN	1.110	.370	.590	.340	.560	.420
JUL	1.800	.440	.670	.640	.530	.570
AUG	1.050	.650	.	.	.800	.560
SEP	.910	.480	.580	.530	.570	.520
OCT	.900	.520	.730	.490	.650	.520
NOV	.940	.500	.610	.550	.680	.730
DEC	1.090	.930	.580	.680	.830	.810

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE			SITE 1		SITE 2	
TYPE	RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
METALS						
SILVER (UG/L)			DET'N LIMIT = .020		GUIDELINE = 50. (A1)	
JAN	.020 <T	.030 <T	.030 <T	.030 <T	.020 <T	BDL
FEB	.020 <T	.020 <T	.020 <T	.060 <T	.050 <T	.020 <T
MAR	.020 <T	.020 <T	.	.	.	.
APR	BDL	BDL	.090 <T	.040 <T	.040 <T	BDL
MAY	BDL	BDL	BDL	BDL	BDL	BDL
JUN	.030 <T	.030 <T	BDL	BDL	BDL	BDL
JUL	BDL	BDL	BDL	BDL	BDL	.050 <T
AUG	BDL	.050 <T	.	.	.050 <T	BDL
SEP	BDL	.040 <T	BDL	.030 <T	.070 <T	.080 <T
OCT	BDL	BDL	BDL	BDL	BDL	BDL
NOV	.030 <T	BDL	BDL	BDL	.040 <T	BDL
DEC	BDL	BDL	BDL	BDL	BDL	BDL
ALUMINUM (UG/L)			DET'N LIMIT = .050		GUIDELINE = 100.(A4)	
JAN	7.000	190.000	170.000	180.000	140.000	160.000
FEB	6.800	12.000	22.000	14.000	40.000	18.000
MAR	5.900	6.900	.	.	.	.
APR	12.000	42.000	23.000	19.000	110.000	35.000
MAY	4.200	270.000	190.000	260.000	210.000	210.000
JUN	11.000	260.000	250.000	250.000	180.000	220.000
JUL	20.000	140.000	130.000	150.000	120.000	150.000
AUG	3.800	200.000	.	.	200.000	150.000
SEP	12.000	160.000	130.000	220.000	120.000	150.000
OCT	11.000	220.000	200.000	210.000	200.000	190.000
NOV	10.000	200.000	180.000	220.000	180.000	180.000
DEC	9.200	220.000	190.000	190.000	190.000	220.000
ARSENIC (UG/L)			DET'N LIMIT = 0.050		GUIDELINE = 50.0 (A1)	
JAN	.290 <T	.780 <T	.610 <T	.770 <T	.620 <T	.650 <T
FEB	.280 <T	.710 <T	.640 <T	.720 <T	.590 <T	.580 <T
MAR	.220 <T	.740 <T	.	.	.	.
APR	.240 <T	.510 <T	.510 <T	.510 <T	.730 <T	.480 <T
MAY	.090 <T	.660 <T	.290 <T	.390 <T	.350 <T	.420 <T
JUN	.400 <T	.630 <T	.510 <T	.480 <T	.560 <T	.440 <T
JUL	.360 <T	.460 <T	.540 <T	.730 <T	.640 <T	.640 <T
AUG	.290 <T	.570 <T	.	.	.660 <T	.520 <T
SEP	.490 <T	.680 <T	.440 <T	.830 <T	.530 <T	.490 <T
OCT	.490 <T	.510 <T	.490 <T	.900 <T	.680 <T	.890 <T
NOV	.430 <T	.660 <T	.640 <T	.740 <T	.600 <T	.560 <T
DEC	.370 <T	.670 <T	.820 <T	.810 <T	.730 <T	.650 <T

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
BARIUM (UG/L)			DET'N LIMIT = 0.020		GUIDELINE = 1000. (A1)	
JAN	29.000	27.000	30.000	27.000	31.000	27.000
FEB	32.000	31.000	34.000	29.000	34.000	31.000
MAR	33.000	32.000	.	.	.	.
APR	28.000	28.000	29.000	27.000	31.000	28.000
MAY	28.000	29.000	30.000	28.000	32.000	30.000
JUN	30.000	30.000	29.000	29.000	32.000	30.000
JUL	31.000	33.000	31.000	31.000	31.000	32.000
AUG	14.000	29.000	.	.	29.000	31.000
SEP	30.000	31.000	32.000	32.000	30.000	30.000
OCT	31.000	30.000	30.000	30.000	31.000	29.000
NOV	30.000	29.000	31.000	28.000	30.000	27.000
DEC	28.000	27.000	29.000	29.000	31.000	27.000
BORON (UG/L)			DET'N LIMIT = 0.200		GUIDELINE = 5000. (A1)	
JAN	10.000 <T	9.800 <T	10.000 <T	9.800 <T	10.000 <T	9.900 <T
FEB	9.600 <T	10.000 <T	9.500 <T	9.500 <T	9.600 <T	9.000 <T
MAR	9.000 <T	7.900 <T	.	.	.	.
APR	8.000 <T	9.100 <T	8.500 <T	6.900 <T	7.400 <T	7.600 <T
MAY	11.000 <T	15.000 <T	8.400 <T	7.500 <T	7.500 <T	9.800 <T
JUN	14.000 <T	14.000 <T	14.000 <T	9.200 <T	14.000 <T	10.000 <T
JUL	8.900 <T	8.700 <T	10.000 <T	7.400 <T	8.800 <T	8.800 <T
AUG	11.000 <T	45.000	.	.	12.000 <T	10.000 <T
SEP	40.000	33.000	24.000	38.000	13.000 <T	33.000
OCT	22.000	18.000 <T	21.000	16.000 <T	24.000	24.000
NOV	54.000	32.000	12.000 <T	12.000 <T	40.000	26.000
DEC	11.000 <T	15.000 <T	16.000 <T	20.000 <T	22.000	22.000
BERYLLIUM (UG/L)			DET'N LIMIT = 0.010		GUIDELINE = .20 (H)	
JAN	BDL	BDL	BDL	BDL	.010 <T	BDL
FEB	BDL	BDL	BDL	BDL	BDL	BDL
MAR	.010 <T	.030 <T	.	.	.	.
APR	.040 <T	.050 <T	BDL	.030 <T	BDL	BDL
MAY	BDL	BDL	BDL	BDL	BDL	BDL
JUN	BDL	BDL	BDL	BDL	BDL	BDL
JUL	BDL	BDL	BDL	BDL	BDL	BDL
AUG	BDL	BDL	.	.	BDL	BDL
SEP	.090 <T	.070 <T	.040 <T	.040 <T	BDL	.040 <T
OCT	.040 <T	.030 <T	.030 <T	.030 <T	.080 <T	.040 <T
NOV	BDL	BDL	BDL	BDL	.020 <T	BDL
DEC	.020 <T	.090 <T	.060 <T	.060 <T	.090 <T	.020 <T
CADMIUM (UG/L)			DET'N LIMIT = 0.050		GUIDELINE = 5.000 (A1)	

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DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
JAN	BDL	BDL	BDL	BDL	.090 <T	BDL
FEB	BDL	BDL	BDL	BDL	.130 <T	BDL
MAR	BDL	BDL	.	.	.	.
APR	BDL	BDL	BDL	BDL	.100 <T	BDL
MAY	BDL	BDL	BDL	BDL	.120 <T	BDL
JUN	BDL	BDL	BDL	.070 <T	.080 <T	BDL
JUL	BDL	BDL	BDL	BDL	.110 <T	BDL
AUG	BDL	BDL	.	.	.360 <T	BDL
SEP	BDL	.080 <T	.070 <T	.070 <T	.150 <T	.090 <T
OCT	BDL	BDL	BDL	BDL	.100 <T	BDL
NOV	BDL	BDL	BDL	BDL	.120 <T	BDL
DEC	BDL	BDL	.070 <T	BDL	.110 <T	BDL
COBALT (UG/L)			DET'N LIMIT = 0.020		GUIDELINE = 1000 (H)	
JAN	.310 <T	.290 <T	.300 <T	.330 <T	.300 <T	.290 <T
FEB	.060 <T	.070 <T	.090 <T	.070 <T	.050 <T	.050 <T
MAR	.100 <T	.090 <T	.	.	.	.
APR	.040 <T	.040 <T	.070 <T	.060 <T	.090 <T	.060 <T
MAY	BDL	BDL	.040 <T	BDL	.030 <T	BDL
JUN	.080 <T	.170 <T	.130 <T	.100 <T	.110 <T	.070 <T
JUL	.040 <T	.040 <T	.060 <T	.040 <T	.080 <T	BDL
AUG	.380 <T	.130 <T	.	.	.100 <T	.060 <T
SEP	.090 <T	.110 <T	.100 <T	.130 <T	.100 <T	.120 <T
OCT	.170 <T	.120 <T	.150 <T	.140 <T	.140 <T	.100 <T
NOV	.070 <T	.090 <T	.100 <T	.060 <T	.050 <T	.040 <T
DEC	.180 <T	.160 <T	.210 <T	.100 <T	.140 <T	.140 <T
CHROMIUM (UG/L)			DET'N LIMIT = 0.100		GUIDELINE = 50. (A1)	
JAN	.130 <T	.130 <T	.140 <T	.140 <T	.160 <T	.120 <T
FEB	.100 <T	.120 <T	.120 <T	BDL	.150 <T	.120 <T
MAR	.330 <T	.130 <T	.	.	.	.
APR	.220 <T	.640 <T	.200 <T	.130 <T	.130 <T	.110 <T
MAY	1.300	2.300	BDL	.410 <T	BDL	.710 <T
JUN	.980 <T	.750 <T	.510 <T	BDL	1.000 <T	.150 <T
JUL	BDL	BDL	BDL	BDL	BDL	BDL
AUG	.270 <T	2.200	.	.	.240 <T	BDL
SEP	2.800	4.700	.760 <T	5.900	1.200	5.300
OCT	3.800	2.300	3.400	2.000	4.500	4.400
NOV	4.100	1.900	BDL	BDL	2.600	1.200
DEC	.160 <T	.870 <T	.290 <T	1.800	2.100	1.900
COPPER (UG/L)			DET'N LIMIT = .100		GUIDELINE = 1000 (A3)	
JAN	8.100	.370 <T	180.000	11.000	150.000	18.000

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DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE			SITE 1		SITE 2	
TYPE	RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	6.200	.440 <T	310.000	13.000	160.000	15.000
MAR	5.600	.420 <T	.	.	.	.
APR	7.200	.410 <T	160.000	13.000	220.000	20.000
MAY	8.600	.560 <T	130.000	24.000	220.000	27.000
JUN	13.000	.550 <T	160.000	22.000	100.000	23.000
JUL	12.000	.520 <T	120.000	21.000	120.000	22.000
AUG	17.000	.610 <T	.	.	110.000	19.000
SEP	5.700	.340 <T	150.000	22.000	150.000	21.000
OCT	8.500	.470 <T	130.000	15.000	150.000	26.000
NOV	9.600	.370 <T	390.000	11.000	170.000	17.000
DEC	7.700	.510 <T	190.000	14.000	150.000	18.000
IRON (UG/L)		DET'N LIMIT = 4.000		GUIDELINE = 300. (A3)		
JAN	31.000 <T	11.000 <T	7.400 <T	8.400 <T	19.000 <T	7.600 <T
FEB	33.000 <T	29.000 <T	26.000 <T	23.000 <T	32.000 <T	34.000 <T
MAR	37.000 <T	31.000 <T	.	.	.	.
APR	91.000	45.000	44.000	49.000	110.000	68.000
MAY	16.000 <T	26.000 <T	17.000 <T	17.000 <T	51.000	47.000 <T
JUN	53.000	17.000 <T	16.000 <T	14.000 <T	40.000 <T	33.000 <T
JUL	46.000 <T	BDL	8.700 <T	7.500 <T	26.000 <T	28.000 <T
AUG	BDL	BDL	.	.	51.000	17.000 <T
SEP	31.000 <T	7.900 <T	14.000 <T	5.600 <T	23.000 <T	23.000 <T
OCT	34.000 <T	17.000 <T	17.000 <T	15.000 <T	42.000 <T	52.000
NOV	31.000 <T	10.000 <T	13.000 <T	16.000 <T	57.000	55.000
DEC	34.000 <T	18.000 <T	15.000 <T	13.000 <T	49.000 <T	48.000 <T
MERCURY (UG/L)		DET'N LIMIT = 0.010		GUIDELINE = 1.000 (A1)		
JAN	.020	.010	.	.010	.	BDL
FEB	.010	.010	.	.010	.	BDL
MAR	.010	.020	.	.	.	.
APR	.020	.020	.	.010	.	.010
MAY	.020 <T	.040 <T	.	BDL	.	BDL
JUN	.020 <T	.060	.	BDL	.	.020 <T
JUL	.030 <T	.050 <T	.	.040 <T	.	.040 <T
AUG	.030 <T	.040 <T	.	.	.	BDL
SEP	.040 <T	.040 <T	.	BDL	.	BDL
OCT	.030 <T	.030 <T	.	.020 <T	.	BDL
NOV	.040 <T	.040 <T	.	BDL	.	BDL
DEC	.030 <T	.040 <T	.	BDL	.	BDL
MANGANESE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 50.0 (A3)		
JAN	6.300	1.300	1.300	1.500	3.400	3.000

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DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE						
	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	7.400	3.200	3.600	3.400	5.200	4.500
MAR	7.100	3.600	.	.	.	.
APR	33.000	4.700	5.500	6.100	10.000	7.000
MAY	1.600	3.300	2.700	2.800	7.200	5.800
JUN	23.000	4.500	5.500	4.500	6.400	6.800
JUL	36.000	3.000	4.000	3.600	7.100	7.800
AUG	.250 <T	2.000	.	.	6.800	5.200
SEP	19.000	1.600	1.800	2.500	4.600	4.900
OCT	18.000	4.200	4.100	3.400	5.800	6.200
NOV	12.000	2.500	3.500	2.600	6.700	6.100
DEC	6.800	1.700	2.000	1.900	5.800	4.800
MOLYBDENUM (UG/L)			DET'N LIMIT = 0.020		GUIDELINE = 500 (H)	
JAN	.240 <T	.290 <T	.310 <T	.280 <T	.250 <T	.270 <T
FEB	.270 <T	.320 <T	.310 <T	.280 <T	.290 <T	.310 <T
MAR	.270 <T	.300 <T	.	.	.	.
APR	.170 <T	.130 <T	.240 <T	.220 <T	.170 <T	.220 <T
MAY	.410 <T	.330 <T	.350 <T	.310 <T	.270 <T	.320 <T
JUN	.290 <T	.320 <T	.320 <T	.330 <T	.360 <T	.350 <T
JUL	.280 <T	.350 <T	.320 <T	.330 <T	.360 <T	.310 <T
AUG	.320 <T	.340 <T	.	.	.340 <T	.300 <T
SEP	.240 <T	.250 <T	.290 <T	.230 <T	.240 <T	.280 <T
OCT	.300 <T	.300 <T	.220 <T	.260 <T	.180 <T	.180 <T
NOV	.240 <T	.320 <T	.290 <T	.320 <T	.260 <T	.290 <T
DEC	.280 <T	.310 <T	.350 <T	.400 <T	.420 <T	.340 <T
NICKEL (UG/L)			DET'N LIMIT = 0.100		GUIDELINE = 50. (F3)	
JAN	3.100	3.000	11.000	2.800	4.200	3.100
FEB	BDL	BDL	3.100	BDL	.860 <T	.220 <T
MAR	.280 <T	.470 <T	.	.	.	.
APR	BDL	BDL	1.100 <T	BDL	1.600	BDL
MAY	BDL	BDL	.650 <T	BDL	1.300 <T	BDL
JUN	BDL	BDL	4.500	BDL	1.500 <T	BDL
JUL	.120 <T	.160 <T	3.400	.130 <T	2.600	.200 <T
AUG	BDL	BDL	.	.	2.000 <T	BDL
SEP	BDL	BDL	5.300	BDL	2.600	BDL
OCT	BDL	BDL	5.900	BDL	1.300 <T	.440 <T
NOV	BDL	BDL	17.000	BDL	1.400 <T	BDL
DEC	.580 <T	.560 <T	7.200	.450 <T	3.600	.310 <T
LEAD (UG/L)			DET'N LIMIT = 0.050		GUIDELINE = 50. (A1)	
JAN	.150 <T	.050 <T	5.900	.620	6.700	.590

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DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	.130 <T	.080 <T	12.000	.740	5.100	.600
MAR	.160 <T	.110 <T	.	.	.	.
APR	.250	.090 <T	6.000	.760	9.200	.740
MAY	.050 <T	.260	5.900	1.200	8.000	1.000
JUN	.180 <T	.100 <T	6.100	1.300	9.300	1.300
JUL	.260	BDL	5.500	1.500	7.900	1.400
AUG	.140 <T	.100 <T	.	.	8.800	1.400
SEP	.170 <T	.100 <T	6.900	1.500	9.800	1.500
OCT	.110 <T	.040 <T	5.700	.920	8.400	1.100
NOV	.270	.070 <T	15.000	.790	9.600	.810
DEC	.170 <T	.090 <T	8.600	1.000	8.000	.890
ANTIMONY (UG/L)			DET'N LIMIT = .050		GUIDELINE = 146. (D4)	
JAN	.080 <T	.090 <T	.120 <T	.060 <T	.140 <T	.070 <T
FEB	.090 <T	.050 <T	.080 <T	.080 <T	.150 <T	.090 <T
MAR	.060 <T	.060 <T	.	.	.	.
APR	.070 <T	.060 <T	.140 <T	.060 <T	.180 <T	.070 <T
MAY	.070 <T	.070 <T	.100 <T	.060 <T	.210	.070 <T
JUN	.100 <T	.100 <T	.100 <T	.090 <T	.150 <T	.090 <T
JUL	.060 <T	.050 <T	.120 <T	.070 <T	.160 <T	.080 <T
AUG	2.600	.500	.	.	.650	.570
SEP	.410	.340	.600	.450	.600	.570
OCT	.440	.490	.430	.440	.410	.450
NOV	.480	.520	.510	.380	.540	.410
DEC	.230	.200 <T	.250	.700	.430	.330
SELENIUM (UG/L)			DET'N LIMIT = 0.200		GUIDELINE = 10. (A1)	
JAN	.990 <T	1.400 <T	1.700 <T	1.300 <T	2.000 <T	1.300 <T
FEB	.430 <T	.550 <T	.710 <T	.640 <T	.760 <T	.740 <T
MAR	BDL	.350 <T	.	.	.	.
APR	.720 <T	.880 <T	.350 <T	.470 <T	.410 <T	.660 <T
MAY	BDL	BDL	BDL	.470 <T	BDL	BDL
JUN	.280 <T	BDL	.550 <T	.750 <T	BDL	BDL
JUL	1.000 <T	1.100 <T	.760 <T	.890 <T	1.400 <T	.480 <T
AUG	BDL	BDL	.	.	.340 <T	BDL
SEP	BDL	1.400 <T	BDL	BDL	BDL	BDL
OCT	1.300 <T	3.200 <T	2.800 <T	2.000 <T	3.000 <T	2.500 <T
NOV	.280 <T	1.700 <T	1.300 <T	BDL	2.000 <T	1.100 <T
DEC	BDL	1.300 <T	.670 <T	1.400 <T	1.300 <T	1.200 <T
STRONTIUM (UG/L)			DET'N LIMIT = .050		GUIDELINE = 2000.(H)	
JAN	130.000	120.000	120.000	120.000	130.000	120.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	130.000	130.000	130.000	120.000	130.000	130.000
MAR	130.000	140.000	.	.	.	.
APR	100.000	100.000	110.000	110.000	110.000	110.000
MAY	120.000	120.000	130.000	120.000	120.000	130.000
JUN	120.000	120.000	120.000	120.000	120.000	120.000
JUL	110.000	110.000	110.000	110.000	110.000	110.000
AUG	80.000	120.000	.	.	110.000	110.000
SEP	120.000	110.000	120.000	120.000	120.000	110.000
OCT	100.000	110.000	110.000	100.000	110.000	110.000
NOV	110.000	110.000	110.000	110.000	110.000	110.000
DEC	99.000	99.000	100.000	100.000	110.000	100.000
TITANIUM (UG/L)			DET'N LIMIT = .050		GUIDELINE = N/A	
JAN	3.600	3.500	3.600	3.900	3.900	3.700
FEB	5.500	5.500	5.900	5.900	5.800	5.600
MAR	4.900	5.500	.	.	.	.
APR	5.400	5.500	4.900	4.900	5.900	5.000
MAY	4.500	4.400	4.100	3.900	4.300	4.200
JUN	4.300	4.100	4.000	4.300	3.800	4.000
JUL	4.800	3.900	4.000	3.900	4.200	4.200
AUG	3.800	11.000	.	.	11.000	11.000
SEP	6.600	2.000 <T	1.700 <T	2.500	2.500	2.600
OCT	4.100	3.100	3.300	3.800	3.900	3.600
NOV	5.400	6.000	5.900	5.800	5.800	6.200
DEC	3.900	3.900	4.400	4.200	4.100	4.400
THALLIUM (UG/L)			DET'N LIMIT = .010		GUIDELINE = 13. (D4)	
JAN	.030 <T	.010 <T	.020 <T	.010 <T	.020 <T	.010 <T
FEB	.010 <T	.010 <T	BDL	.020 <T	BDL	BDL
MAR	BDL	BDL	.	.	.	.
APR	BDL	.020 <T	.030 <T	BDL	BDL	BDL
MAY	BDL	BDL	BDL	BDL	BDL	BDL
JUN	.020 <T	BDL	BDL	BDL	BDL	BDL
JUL	BDL	BDL	BDL	BDL	BDL	BDL
AUG	BDL	BDL	.	.	BDL	BDL
SEP	BDL	.060 <T	.100 <T	.040 <T	.030 <T	.070 <T
OCT	BDL	BDL	BDL	BDL	BDL	BDL
NOV	.020 <T	BDL	.030 <T	BDL	BDL	BDL
DEC	BDL	BDL	BDL	.050 <T	.020 <T	.020 <T
URANIUM (UG/L)			DET'N LIMIT = .020		GUIDELINE = 20. (A2)	
JAN	.250	.200	.220	.200	.210	.210

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	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	.280	.280	.280	.330	.280	.280
MAR	.210	.250	.	.	.	.
APR	.140 <T	.150 <T	.190 <T	.200 <T	.120 <T	.240
MAY	.310	.220	.190 <T	.190 <T	.180 <T	.170 <T
JUN	.240	.270	.240	.240	.280	.280
JUL	.220	.210	.200 <T	.200 <T	.200 <T	.190 <T
AUG	.200 <T	.240	.	.	.260	.240
SEP	.180 <T	.240	.160 <T	.260	.190 <T	.270
OCT	.150 <T	.180 <T	.170 <T	.140 <T	.200 <T	.170 <T
NOV	.190 <T	.180 <T	.180 <T	.180 <T	.200 <T	.200 <T
DEC	.160 <T	.160 <T	.170 <T	.250	.170 <T	.240
VANADIUM (UG/L)			DET'N LIMIT = .050		GUIDELINE = 100 (H)	
JAN	.280 <T	.240 <T	.270 <T	.240 <T	.270 <T	.250 <T
FEB	.170 <T	.180 <T	.190 <T	.160 <T	.190 <T	.160 <T
MAR	.140 <T	.140 <T	.	.	.	.
APR	.080 <T	.020 <T	.010 <T	.010 <T	.060 <T	BDL
MAY	.200 <T	.220 <T	.180 <T	.190 <T	.170 <T	.140 <T
JUN	.320 <T	.280 <T	.290 <T	.300 <T	.210 <T	.260 <T
JUL	.490 <T	.400 <T	.350 <T	.410 <T	.320 <T	.380 <T
AUG	.420 <T	.440 <T	.	.	.400 <T	.370 <T
SEP	.460 <T	.380 <T	.400 <T	.430 <T	.370 <T	.430 <T
OCT	.350 <T	.270 <T	.280 <T	.290 <T	.310 <T	.280 <T
NOV	.400 <T	.340 <T	.280 <T	.310 <T	.340 <T	.280 <T
DEC	.310 <T	.270 <T	.320 <T	.450 <T	.340 <T	.310 <T
ZINC (UG/L)			DET'N LIMIT = .001		GUIDELINE = 5.00 (A3)	
JAN	3.700	.890 <T	57.000	2.400	14.000	2.500
FEB	3.200	1.100	49.000	2.100	14.000	1.600
MAR	2.400	.880 <T	.	.	.	.
APR	3.200	.810 <T	37.000	2.900	22.000	2.300
MAY	1.400	.870 <T	37.000	3.700	21.000	2.300
JUN	3.500	.860 <T	69.000	4.300	9.900	1.900
JUL	1.800	BDL	46.000	2.800	14.000	2.200
AUG	.110 <T	.530 <T	.	.	11.000	1.600
SEP	1.300	.520 <T	58.000	3.400	14.000	2.000
OCT	1.400	.470 <T	63.000	2.500	15.000	2.300
NOV	1.900	.390 <T	180.000	1.800	56.000	1.700
DEC	1.800	1.000 <T	59.000	2.200	15.000	2.400

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DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE			SITE 1		SITE 2	
TYPE	RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
PESTICIDES & PCB						
ALPHA BHC (NG/L)		DET'N LIMIT = 1.000		GUIDELINE = 700 (G)		
JAN	1.000 <T	1.000 <T	.	BDL	.	ISM
FEB	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	.	.	.
APR	1.000 <T	1.000 <T	.	1.000 <T	.	1.000 <T
MAY	1.000 <T	BDL	.	BDL	.	BDL
JUN	BDL	1.000 <T	.	1.000 <T	.	BDL
JUL	BDL	BDL	.	1.000 <T	.	2.000 <T
AUG	BDL	BDL	.	.	.	3.000 <T
SEP	BDL	2.000 <T	.	4.000 <T	.	1.000 <T
OCT	BDL	4.000 <T	.	6.000 <T	.	BDL
NOV	BDL	1.000 <T	.	BDL	.	BDL
DEC	2.000 <T	3.000 <T	.	3.000 <T	.	2.000 <T
LINDANE (NG/L)		DET'N LIMIT = 1.000		GUIDELINE = 4000 (A1)		
JAN	BDL	BDL	.	BDL	.	ISM
FEB	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	.	.	.
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	BDL	.	BDL	.	BDL
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	BDL
AUG	BDL	BDL	.	.	.	2.000 <T
SEP	BDL	BDL	.	1.000 <T	.	BDL
OCT	BDL	1.000 <T	.	2.000 <T	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	2.000 <T	.	BDL	.	BDL

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DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
PHENOLICS (UG/L)	PHENOLICS		DET'N LIMIT = 0.2		GUIDELINE = 2.00 (A3)	
JAN	.600 <T	1.000 <T	.	.	.	.
FEB	.800 <T	.800 <T	.	.	.	.
MAR	BDL	BDL	.	.	.	.
APR	BDL	BDL	.	.	.	.
MAY	.200 <T	.400 <T	.	.	.	.
JUN	3.000	3.600	.	.	.	.
JUL	1.600	1.200	.	.	.	.
AUG	2.400	2.600	.	.	.	.
SEP	1.000 <T	1.400	.	.	.	.
OCT	2.600	3.200	.	.	.	.
NOV	2.400	2.800	.	.	.	.
DEC	2.000	2.400	.	.	.	.

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DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
VOLATILES						
BENZENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 5.0 (81)		
JAN	BDL	BDL	.	BDL	.	BDL
MAR	BDL	.050 <T	.	.	.	.
APR	BDL	BDL	.	BDL	.	BDL
MAY	.050 <T	.050 <T	.	BDL	.	BDL
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	BDL
AUG	BDL	BDL	.	.	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	BDL
TOLUENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 24.0 (84)		
JAN	BDL	.150 UCS	.	.200 UCS	.	.200 UCS
MAR	BDL	.050 UCS	.	.	.	.
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	BDL	.	BDL	.	.100 UCS
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	BDL
AUG	BDL	BDL	.	.	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	.050 <T	.	BDL	.	BDL
ETHYLBENZENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 2.4 (84)		
JAN	BDL	BDL	.	BDL	.	BDL
MAR	BDL	.050 <T	.	.	.	.
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	.050 <T	.	BDL	.	.050 <T
JUN	BDL	.050 <T	.	BDL	.	.050 <T
JUL	BDL	.050 <T	.	BDL	.	.050 <T
AUG	BDL	BDL	.	.	.	BDL
SEP	BDL	BDL	.	BDL	.	.050 <T
OCT	BDL	.050 <T	.	BDL	.	BDL
NOV	BDL	.050 <T	.	BDL	.	BDL
DEC	BDL	.100 <T	.	BDL	.	BDL
M-XYLENE (UG/L)		DET'N LIMIT = .100		GUIDELINE = 300 (84)		
JAN	BDL	BDL	.	BDL	.	BDL

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DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
MAR	BDL	BDL	.	.	.	.
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	.100 <T	.	.100 <T	.	.100 <T
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	BDL
AUG	BDL	BDL	.	.	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	BDL
O-XYLENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 300 (B4)		
JAN	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	.	.	.
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	.050 <T	.	.050 <T	.	.050 <T
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	BDL
AUG	BDL	BDL	.	.	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	BDL
STYRENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 46.5 (D2)		
OCT	BDL	BDL	.	BDL	.	.300 <T
NOV	.050 <T	.050 <T	.	BDL	.	.100 <T
DEC	BDL	.100 <T	.	BDL	.	.150 <T
METHYLENE CHLORIDE (UG/L)		DET'N LIMIT = .500		GUIDELINE = 1750 (D3)		
JAN	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	.	.	.
APR	BDL	.500 APS	.	.500 APS	.	.500 APS
MAY	BDL	BDL	.	BDL	.	BDL
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	BDL
AUG	BDL	BDL	.	.	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	BDL

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DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
CHLOROFORM (UG/L)			DET'N LIMIT = .100		GUIDELINE = 350 (A1+)	
JAN	BDL	70.000	.	38.800	.	36.600
MAR	BDL	99.200	.	.	.	.
APR	BDL	127.000	.	151.400	.	128.500
MAY	BDL	145.000	.	200.000	.	175.000
JUN	BDL	161.000	.	165.000	.	142.000
JUL	.400 <T	232.000	.	201.000	.	167.000
AUG	1.300	180.300	.	.	.	140.000
SEP	.400 <T	176.000	.	182.100	.	140.100
OCT	.200 <T	138.100	.	151.900	.	116.600
NOV	BDL	137.000	.	132.000	.	100.000
DEC	BDL	121.000	.	101.000	.	87.000
111, TRICHLOROETHANE (UG/L)			DET'N LIMIT = .020		GUIDELINE = 200 (D1)	
JAN	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	.	.	.
APR	BDL	BDL	.	BDL	.	BDL
MAY	.200 <T	BDL	.	BDL	.	BDL
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	BDL
AUG	BDL	BDL	.	.	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	.060 <T
CARBON TETRACHLORIDE (UG/L)			DET'N LIMIT = .200		GUIDELINE = 5.0 (D1)	
JAN	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	.	.	.
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	BDL	.	BDL	.	BDL
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	BDL
AUG	.200 <T	BDL	.	.	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	BDL
DICHLOROBROMOMETHANE (UG/L)			DET'N LIMIT = .050		GUIDELINE = 350 (A1+)	
JAN	BDL	5.600	.	3.350	.	3.350
MAR	BDL	8.100	.	.	.	.

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DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
APR	BDL	6.200	.	6.900	.	6.100
MAY	BDL	7.650	.	8.500	.	7.100
JUN	BDL	7.600	.	7.900	.	7.250
JUL	.100 <T	10.200	.	10.100	.	8.900
AUG	BDL	10.100	.	.	.	9.400
SEP	BDL	9.750	.	10.350	.	8.750
OCT	BDL	8.550	.	9.400	.	8.000
NOV	BDL	9.300	.	8.700	.	7.350
DEC	BDL	8.000	.	7.150	.	6.200
112 TRICHLOROETHANE (UG/L)		DET'N LIMIT = .050		GUIDELINE = .60 (D4)		
JAN	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	.	.	.
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	BDL	.	BDL	.	BDL
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	.200 <T	.	BDL	.	BDL
AUG	BDL	BDL	.	.	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	BDL
CHLORODIBROMOMETHANE (UG/L)		DET'N LIMIT = .100		GUIDELINE = 350 (A1+)		
JAN	BDL	BDL	.	BDL	.	BDL
MAR	BDL	.200 <T	.	.	.	.
APR	BDL	.700 <T	.	.800 <T	.	.700 <T
MAY	BDL	.400 <T	.	1.400	.	1.300
JUN	BDL	.200 <T	.	.200 <T	.	.200 <T
JUL	BDL	BDL	.	.300 <T	.	.300 <T
AUG	BDL	.400 <T	.	.	.	.300 <T
SEP	BDL	.400 <T	.	.400 <T	.	.400 <T
OCT	BDL	.300 <T	.	.600 <T	.	.500 <T
NOV	BDL	.300 <T	.	.300 <T	.	.300 <T
DEC	BDL	.400 <T	.	.200 <T	.	.200 <T
T-CHLOROETHYLENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 10.0 (C2)		
JAN	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	.	.	.
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	.	.	.	.	.
JUN	BDL	BDL	.	BDL	.	BDL

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM PETERBOROUGH WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
JUL	BDL	BDL	.	BDL	.	BDL
AUG	BDL	BDL	.	.	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	.050 <T	.	BDL	.	BDL
NOV	BDL	.150 <T	.	.100 <T	.	.050 <T
DEC	BDL	BDL	.	BDL	.	BDL
1122 T-CHLOROETHANE (UG/L)			DET'N LIMIT = .050		GUIDELINE = 0.17 (D4)	
JAN	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	.	.	.
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	BDL	.	BDL	.	BDL
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	BDL
AUG	BDL	BDL	.	.	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	.050 <T
TOTL TRIHALOMETHANES (UG/L)			DET'N LIMIT = .500		GUIDELINE = 350 (A1)	
JAN	BDL	75.600	.	42.150	.	39.950
MAR	BDL	107.500	.	.	.	.
APR	BDL	133.900	.	159.100	.	135.300
MAY	BDL	153.050	.	209.900	.	183.400
JUN	BDL	168.800	.	173.100	.	149.500
JUL	.500 <T	242.400	.	211.400	.	176.200
AUG	1.300 <T	190.800	.	.	.	149.700
SEP	BDL	186.150	.	192.850	.	149.250
OCT	BDL	146.950	.	161.900	.	125.100
NOV	BDL	146.600	.	141.000	.	107.650
DEC	BDL	129.400	.	108.350	.	93.400

Table VI

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
BACTERIOLOGICAL			
STANDARD PLATE COUNT MEMBRANE	CT/ML	0	500/ML(A1)
FILTRATION			
P/A BOTTLE		0	0 (A1*)
TOTAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	5/100mL(A1)
TOTAL COLIFORM BACKGROUND MF	CT/100ML	0	N/A
CHLOROAROMATICS			
HEXACHLOROBUTADIENE	NG/L	1.000	450. (D4)
1,2,3-TRICHLOROBENZENE	NG/L	5.000	10000 (I)
1,2,3,4-TETRACHLOROBENZENE	NG/L	1.000	10000 (I)
1,2,3,5-TETRACHLOROBENZENE	NG/L	1.000	10000 (I)
1,2,4-TRICHLOROBENZENE	NG/L	5.000	10000 (I)
1,2,4,5-TETRACHLOROBENZENE	NG/L	1.000	38000 (D4)
1,3,5-TRICHLOROBENZENE	NG/L	5.000	10000 (D4)
HEXACHLOROBENZENE	NG/L	1.0	10. (C1)
HEXACHLOROETHANE	NG/L	1.000	1900. (D4)
OCTACHLOROSTYRENE	NG/L	1.000	N/A
PENTACHLOROBENZENE	NG/L	1.000	74000 (D4)
2,3,6-TRICHLOROTOLUENE	NG/L	5.000	N/A
2,4,5-TRICHLOROTOLUENE	NG/L	5.000	N/A
2,6,A-TRICHLOROTOLUENE	NG/L	5.000	N/A
CHLOROPHENOLS			
2,3,4-TRICHLOROPHENOL	NG/L	50.	N/A
2,3,4,5-TETRACHLOROPHENOL	NG/L	50.	N/A
2,3,5,6-TETRACHLOROPHENOL	NG/L	50.	N/A
2,4,5-TRICHLOROPHENOL	NG/L	50.	2600000 (D4)
2,4,6-TRICHLOROPHENOL	NG/L	50.	5000. (B1)
PENTACHLOROPHENOL	NG/L	50.	60000. (B1)
CHEMISTRY (FLD)			
FIELD COMBINED CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD FREE CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD TOTAL CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD PH	DMSNLESS	N/A	6.5-8.5(A4)
FIELD TEMPERATURE	°C	N/A	<15 °C(A1)
FIELD TURBIDITY	FTU	N/A	1.0 (A1)
CHEMISTRY (LAB)			
ALKALINITY	MG/L	.200	30-500(A4)
CALCIUM	MG/L	.100	100. (F2)
CYANIDE	MG/L	.001	.20(A1)
CHLORIDE	MG/L	.200	250. (A3)
COLOUR	TCU	.5	5.0 (A3)
CONDUCTIVITY	UMHO/CM	1.	400. (F2)
FLUORIDE	MG/L	.01	2.4 (A1)
HARDNESS	MG/L	.50	80-100(A4)
MAGNESIUM	MG/L	.05	30. (F2)
SODIUM	MG/L	.20	200. (C3)
AMMONIUM TOTAL	MG/L	.002	.05(F2)
NITRITE	MG/L	.001	1.0 (A1)
TOTAL NITRATES	MG/L	.02	10. (A1)
NITROGEN TOTAL KJELDAHL	MG/L	.02	N/A
PH	DMSNLESS	N/A	6.5-8.5(A4)
PHOSPHORUS FIL REACT	MG/L	.0005	N/A
PHOSPHORUS TOTAL	MG/L	.002	.40(F2)
TOTAL SOLIDS	MG/L	1.	500. (A3)
TURBIDITY	FTU	.02	1.0 (A1)
METALS			
ALUMINUM	UG/L	.050	100. (A4)

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE	
BERYLLIUM	UG/L	.010	0.20	(H)
CADMIUM	UG/L	.050	5.0	(A1)
COBALT	UG/L	.020	1000.	(H)
CHROMIUM	UG/L	.100	50.	(A1)
COPPER	UG/L	.100	1000.	(A3)
IRON	UG/L	4.0	300.	(A3)
MERCURY	UG/L	.01	1.0	(A1)
MANGANESE	UG/L	.050	50.	(A3)
MOLYBDENUM	UG/L	.020	500.	(H)
NICKEL	UG/L	.100	50.	(F3)
LEAD	UG/L	.050	50.	(A1)
SELENIUM	UG/L	.200	10.	(A1)
SILVER	UG/L	.020	50.	(A1)
STRONTIUM	UG/L	.050	2000.	(H)
THALLIUM	UG/L	.010	13.	(D4)
TITANIUM	UG/L	.050	N/A	
URANIUM	UG/L	.020	20.	(A2)
VANADIUM	UG/L	.050	100.	(H)
ZINC	UG/L	.020	500.	(A3)
PHENOLICS				
PHENOLICS (UNFILTERED REACTIVE)	UG/L	.2	2.0	(A3)
PESTICIDES & PCB				
ALDRIN	NG/L	1.0	700.	(A1)
AMETRINE	NG/L	50.	300000.	(D3)
ATRAZINE	NG/L	50.	60000.	(B3)
ALPHA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	700.	(G)
BETA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	300.	(G)
GAMMA HEXACHLOROCYCLOHEXANE(LINDANE)	NG/L	1.0	4000.	(A1)
ALPHA CHLORDANE	NG/L	2.0	7000.	(A1)
GAMMA CHLORDANE	NG/L	2.0	7000.	(A1)
BLADEX	NG/L	100.	10000.	(B3)
DIELDRIN	NG/L	2.0	700.	(A1)
METHOXYCHLOR	NG/L	5.0	100000.	(A1)
ENDOSULFAN 1 (THIODAN I)	NG/L	2.0	74000.	(D4)
ENDOSULFAN 2 (THIODAN II)	NG/L	4.0	74000.	(D4)
ENDRIN	NG/L	4.0	200.	(A1)
ENDOSULFAN SULPHATE(THIODAN SULPHATE)	NG/L	4.0	N/A	
HEPTACHLOR EPOXIDE	NG/L	1.0	3000.	(A1)
HEPTACHLOR	NG/L	1.0	3000.	(A1)
METOLACHLOR	NG/L	500.	50000.	(B3)
MIREX	NG/L	5.0	N/A	
OXYCHLORDANE	NG/L	2.0	N/A	
O,P-DDT	NG/L	5.0	30000.	(A1)
PCB	NG/L	20.0	3000.	(A2)
O,P-DDD	NG/L	5.0	N/A	
PPDDE	NG/L	1.0	30000.	(A1)
PPDDT	NG/L	5.0	30000.	(A1)
ATRATONE	NG/L	50.	N/A	
ALACHLOR	NG/L	500.	35000.	(D2)
PROMETONE	NG/L	50.	52500.	(D3)
PROPAZINE	NG/L	50.	16000.	(D2)
PROMETRYNE	NG/L	50.	1000.	(B3)
SENCOR (METRIBUZIN)	NG/L	100.	80000.	(B2)
SIMAZINE	NG/L	50.	10000.	(B3)
POLYAROMATIC HYDROCARBONS				
PHENANTHRENE	NG/L	10.0	N/A	
ANTHRACENE	NG/L	1.0	N/A	
FLUORANTHENE	NG/L	20.0	42000.	(D4)
PYRENE	NG/L	20.0	N/A	
BENZO(A)ANTHRACENE	NG/L	20.0	N/A	
CHRYSENE	NG/L	50.0	N/A	
DIMETHYL BENZO(A)ANTHRACENE	NG/L	5.0	N/A	
BENZO(E)PYRENE	NG/L	50.0	N/A	
BENZO(B)FLUORANTHENE	NG/L	10.0	N/A	
PERYLENE	NG/L	10.0	N/A	
BENZO(K)FLUORANTHENE	NG/L	1.0	N/A	
BENZO(A)PYRENE	NG/L	5.0	10.	(B1)
BENZO(G,H,I)PERYLENE	NG/L	20.0	N/A	

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
DIBENZO(A,H)ANTHRACENE	NG/L	10.0	N/A
INDENO(1,2,3-C,D)PYRENE	NG/L	20.0	N/A
BENZO(B)CHRYSENE	NG/L	2.0	N/A
CORONENE	NG/L	10.0	N/A
SPECIFIC PESTICIDES			
TOXAPHENE	NG/L	N/A	5000. (A1)
2,4,5-TRICHLOROBUTYRIC ACID	NG/L	50.	280000. (B1)
(2,4,5-T)			
2,4-DICHLOROBUTYRIC ACID (2,4-D)	NG/L	100.	100000. (A1)
2,4-DICHLORORPHENOXYBUTYRIC ACID	NG/L	200.	18000. (B3)
2,4-D PROPIONIC ACID	NG/L	100.	N/A
DICAMBA	NG/L	100.	87000. (B3)
PICHLORAM	NG/L	100.	2450000. (D3)
SILVEX (2,4,5-TP)	NG/L	50.	10000. (A1)
DIAZINON	NG/L	20.	14000. (A1)
DICHLOROVOS	NG/L	20.	N/A
DURSBAN	NG/L	20.	N/A
ETHION	NG/L	20.	35000. (G)
GUTHION	NG/L	N/A	N/A
MALATHION	NG/L	20.	160000. (G)
MEVINPHOS	NG/L	20.	N/A
METHYL PARATHION	NG/L	50.	7000. (B3)
METHYLTRITHION	NG/L	20.	N/A
PARATHION	NG/L	20.	35000. (B1)
PHORATE (THIMET)	NG/L	20.	35. (D2)
RELDAN	NG/L	20.	N/A
RONNEL	NG/L	20.	N/A
AMINOCARB	NG/L	N/A	N/A
BENOMYL	NG/L	N/A	N/A
BUX (METALKAMATE)	NG/L	2000.	N/A
CARBOFURAN	NG/L	2000.	18000. (D3)
CICP (CHLORPROPHAM)	NG/L	2000.	350000. (G)
DIALLATE	NG/L	2000.	30000. (H)
EPTAM	NG/L	2000.	N/A
IPC	NG/L	2000.	N/A
PROPOXUR (BAYGON)	NG/L	2000.	90000. (G)
SEVIN (CARBARYL)	NG/L	200.	70000. (A1)
SUTAN (BUTYLATE)	NG/L	2000.	245000. (D3)
VOLATILES			
BENZENE	UG/L	.050	5.0 (B1)
TOLUENE	UG/L	.050	24.0 (B4)
ETHYLBENZENE	UG/L	.050	2.4 (B4)
PARA-XYLENE	UG/L	.100	300. (B4)
META-XYLENE	UG/L	.100	300. (B4)
ORTHO-XYLENE	UG/L	.050	300. (B4)
1,1-DICHLOROETHYLENE	UG/L	.100	7.0 (D1)
ETHLYENE DIBROMIDE	UG/L	.05	50. (G)
METHYLENE CHLORIDE	UG/L	.500	1750. (D3)
TRANS-1,2-DICHLOROETHYLENE	UG/L	.100	350. (D3)
1,1-DICHLOROETHANE	UG/L	.100	N/A
CHLOROFORM	UG/L	.100	350. (A1+)
1,1,1-TRICHLOROETHANE	UG/L	.020	200. (D1)
1,2-DICHLOROETHANE	UG/L	.050	5.0 (D1)
CARBON TETRACHLORIDE	UG/L	.200	5.0 (D1)
1,2-DICHLOROPROPANE	UG/L	.050	10.0 (G)
TRICHLOROETHYLENE	UG/L	.100	5.0 (D1)
DICHLOROBROMOMETHANE	UG/L	.050	350. (A1+)
1,1,2-TRICHLOROETHANE	UG/L	.050	.60(D4)
CHLORODIBROMOMETHANE	UG/L	.100	350. (A1+)
TETRACHLOROETHYLENE	UG/L	.050	10.0 (C2)
BROMOFORM	UG/L	.200	350. (A1+)
1,1,2,2-TETRACHLOROETHANE	UG/L	.050	0.17(D4)
CHLOROBENZENE	UG/L	.100	1510. (D3)
1,4-DICHLOROBENZENE	UG/L	.100	5.0 (B1)
1,3-DICHLOROBENZENE	UG/L	.100	130. (G)
1,2-DICHLOROBENZENE	UG/L	.050	200. (B1)
TRIFLUOROCHLOROTOLUENE	UG/L	.100	N/A
TOTAL TRIHALOMETHANES	UG/L	.500	350. (A1)
STYRENE	UG/L	.05	46.5 (D2)